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Catch and Effort Statistics of the Canadian Groundfish Fishery on the Pacific Coast in 1987

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November 1988

Canadian Technical Report of Fisheries and Aquatic Sciences No. 1656

Fisheries and Oceans Pêches et Océans

Canada

89-02338/

Canadian Technical Report of
Fisheries and Aquatic Sciences

Rapport technique canadien des
sciences halieutiques et aquatiques

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Cat. No. Fs 97-6/1656E ISSN 0706-6457

Correct citation for this publication:

Rutherford, K. L. 1988. Catch and effort statistics of the Canadian Groundfish Fishery on the Pacific coast in 1987. Can. Tech. Rep. Fish. Aquat. Sci. 1656: 86 p.

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ABSTRACT

Rutherford, K. L. 1988. Catch and effort statistics of the Canadian groundfish fishery on the Pacific coast in 1987. Can. Tech. Rep. Fish. Aquat. Sci. No. 1656: 86 p.

Catch and effort statistics for the Canadian groundfish fishery (excluding halibut) on the Pacific coast in 1987 are presented. Statistics are shown by major areas, minor areas, and International North Pacific Fisheries Commission areas in metric tonnes (t). Total domestic landings in 1987 were 34% above the total for 1986. Most of the catch (86%) was taken by trawl gear. The main species landed were Pacific cod, Pacific hake, Pacific ocean perch, sablefish, yellowtail rockfish, lingcod, dogfish, redstripe rockfish and silvergray rockfish.

Joint venture and foreign fisheries along Canada's west coast caught 69,531 t of Pacific hake in 1987.

Key words: groundfish, Pacific coast, catch statistics, effort statistics

RÉSUMÉ

Rutherford, K. L. 1988. Catch and effort statistics of the Canadian groundfish fishery on the Pacific coast in 1987. Can. Tech. Rep. Fish. Aquat. Sci. No. 1656: 86 p.

Ce rapport contient des statistiques portant sur les prises de poissons de fond (excepté le flétan) et sur l'effort de pêche canadiens, le long des côtes canadiennes du Pacifique, pour l'année 1987. Les statistiques sont données en tonnes métriques et portent sur les zones principales, les zones secondaires et les zones placées sous le contrôle de la Commission internationale des Pêcheries du Pacifique nord. L'ensemble des prises débarquées au Canada a dépassé de 34 % celles de 1986 et la plus grande partie de ces prises (86 %) s'est faite au moyen du chalut. Le poisson capturé appartenait principalement aux espèces suivantes : morue du Pacifique, merlu du Pacifique, perche du Pacifique, morue charbonnière, sébaste à queue jaune, morue-lingue, chien de mer, sébaste à raie rouge et sébaste argenté.

Les entreprises de pêche étrangères ou mixtes ont pris 69 531 t de merlu du Pacifique en 1987, le long des côtes ouest du Canada.

Mots clés: poisson de fond, côte du Pacifique, statistiques sur les prises, statistiques sur l'effort de pêche

INTRODUCTION

The Canadian fishery for groundfish along Canada's west coast involves many species of demersal fishes, the majority of which are caught by bottom and midwater trawls. The remaining catch is taken by trap, longline, handline and troll. Excluding halibut, these domestic groundfish landings contributed an average of 38,267 metric tonnes (t) to the annual fish production of Canada during 1977-86. The total landings of major groundfish species, caught by all types of gear from all areas on the Pacific coast during 1977-87 are shown in Table 1.

The Biological Sciences Branch, Pacific Biological Station, Nanaimo, B.C., maintained port liaison officers at Vancouver, Steveston and Prince Rupert during 1987. These persons conducted interviews with captains of trawl and trap vessels to collect information on effort expended for groundfish catches, by species, area and depth as well as other pertinent data. The landings not covered by these interviews were obtained from the sales slips collected by the Statistics Division of the Fisheries Branch in Vancouver. All available 1987 data are included in this report. While changes are rare, individuals using these data for analyses should refer to the author for confirmation.

Total 1987 domestic landings of 70,120 t were 83% above the 1977-86 mean and 34% above the 1986 level. Pacific ocean perch and other rockfish species were the dominant species landed, accounting for 35% of the total catch. There were increases in landings of hake (13,275 t), Pacific cod (13,917 t), pollock (1,270 t), Pacific ocean perch (6,335 t), dogfish (3,801 t), rock sole (887 t) and English sole (755 t). Landings of lingcod (3,591 t), other rockfish species (excluding Pacific ocean perch) (18,177 t) and Dover sole (633 t) showed decreases from 1986 catches.

In 1987, joint-venture and foreign fisheries were conducted along the British Columbia coast by Poland, the U.S.S.R and Korea. These fisheries caught 69,531 t of Pacific hake, 29% more than the amount taken in 1986.

This portion of the document is the traditional report of landings (t) by species, by discrete domestic (minor) fishing areas and by larger United States-Canadian (major) areas, commonly called Pacific Marine Fisheries Commission (PMFC) areas.

Table 1. Total Canadian landings[a] (t) of groundfish by species, taken by all gear from all areas on the Pacific coast, 1977-87.

Species	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	Mean 1977-86	1987
English sole	1,469	809	1,069	1,244	1,500	559	532	812	692	452	914	755
Rock sole	1,252	1,312	1,874	1,843	1,059	745	668	525	430	454	1,017	887
Petrale sole	289	230	202	222	290	367	439	417	336	416	321	445
Dover sole	700	736	861	1,273	1,245	914	871	1,148	963	1,167	988	633
Rex sole	99	102	203	145	190	74	49	219	205	87	137	83
Starry flounder	89	74	296	118	198	168	66	170	66	54	130	65
Turbot	1,599	2,326	1,826	1,488	946	525	323	369	764	895	1,103	1,193
Other flatfish	15	25	59	57	183	220	199	141	161	215	128	232
Pacific cod	7,717	6,750	9,554	8,703	6,708	4,810	4,505	3,465	2,342	3,650	5,820	13,917
Lingcod	2,248	2,004	2,098	2,151	2,467	4,162	3,755	3,688	5,668	3,827	3,207	3,591
Sablefish	1,088	831	2,031	3,793	3,888	3,976	4,414	3,855	4,275	4,668	3,282	4,719
Pollock	890	2,407	3,387	2,201	1,251	924	1,070	800	1,895	577	1,541	1,270
Hake	2	2	818	606	5,691	2,826	3,122	4,600	6,055	6,802	3,052	13,275
Pacific ocean perch	2,716	3,864	2,819	5,290	5,103	5,983	5,655	6,698	6,069	5,914	5,011	6,335
Other rockfish	5,235	6,608	5,962	4,476	4,857	5,093	7,024	8,512	11,709	19,040	7,852	18,177
Misc. species	289	163	215	303	266	141	156	175	192	245	215	344
Dogfish	1,730	3,126	4,757	4,547	1,151	3,875	3,274	2,510	2,815	3,289	3,108	3,801
Animal food	49	112	214	191	42	65	94	161	309	255	150	188
Reduction	181	302	240	528	302	450	321	244	214	175	296	210
Total	27,657	31,783	38,485	39,139	37,337	35,877	36,537	38,509	45,160	52,182	38,267	70,120

[a]Does not include catches from joint-venture or foreign fishery, see Table 54.

MAJOR STATISTICAL AREA DIVISIONS

Standardization between Canada and the United States in reporting of groundfish catches on the Pacific coast has resulted in assignment of catches to certain major statistical areas. In the United States these international areas are used by the Pacific Marine Fisheries Commission in their annual summaries of catch statistics. Figure 1 illustrates the major statistical areas off British Columbia and gives their numerical designation. The following is a complete description of the boundaries of these areas.

AREA 3B--NORTHWEST WASHINGTON COAST

From latitude 47°20'N to a line bearing 220° True from the mid-point of the Bonilla-Tatoosh line and crossing said parallel of latitude. This area includes the Quillayute and Umatilla Reef grounds and the shallow waters off Cape Flattery.

AREA 3C--SOUTHWEST COAST VANCOUVER ISLAND

From the northern boundary of Area 3B to a line bearing 200° True from Estevan Point southward to the 49° parallel of latitude, thence westward along said parallel. This area includes the Cape Flattery Spit, the Swiftsure Bank, La Pérouse Bank (Big Bank or 40 mile Bank), the Cabbage Patch, the Firing Range, the Lennard Island and Sydney Inlet grounds, and the inshore waters of Barkley Sound.

AREA 3D--NORTHWEST COAST VANCOUVER ISLAND

From the northern boundary of Area 3C to latitude 50°30'N. This area includes the Nootka, Esperanza, and Kyuquot grounds as well as the Estevan deep ground.

AREA 4A--PUGET SOUND

The United States territorial waters inside the Bonilla-Tatoosh line including the Juan de Fuca Strait and Puget Sound. There is no Canadian catch from this area.

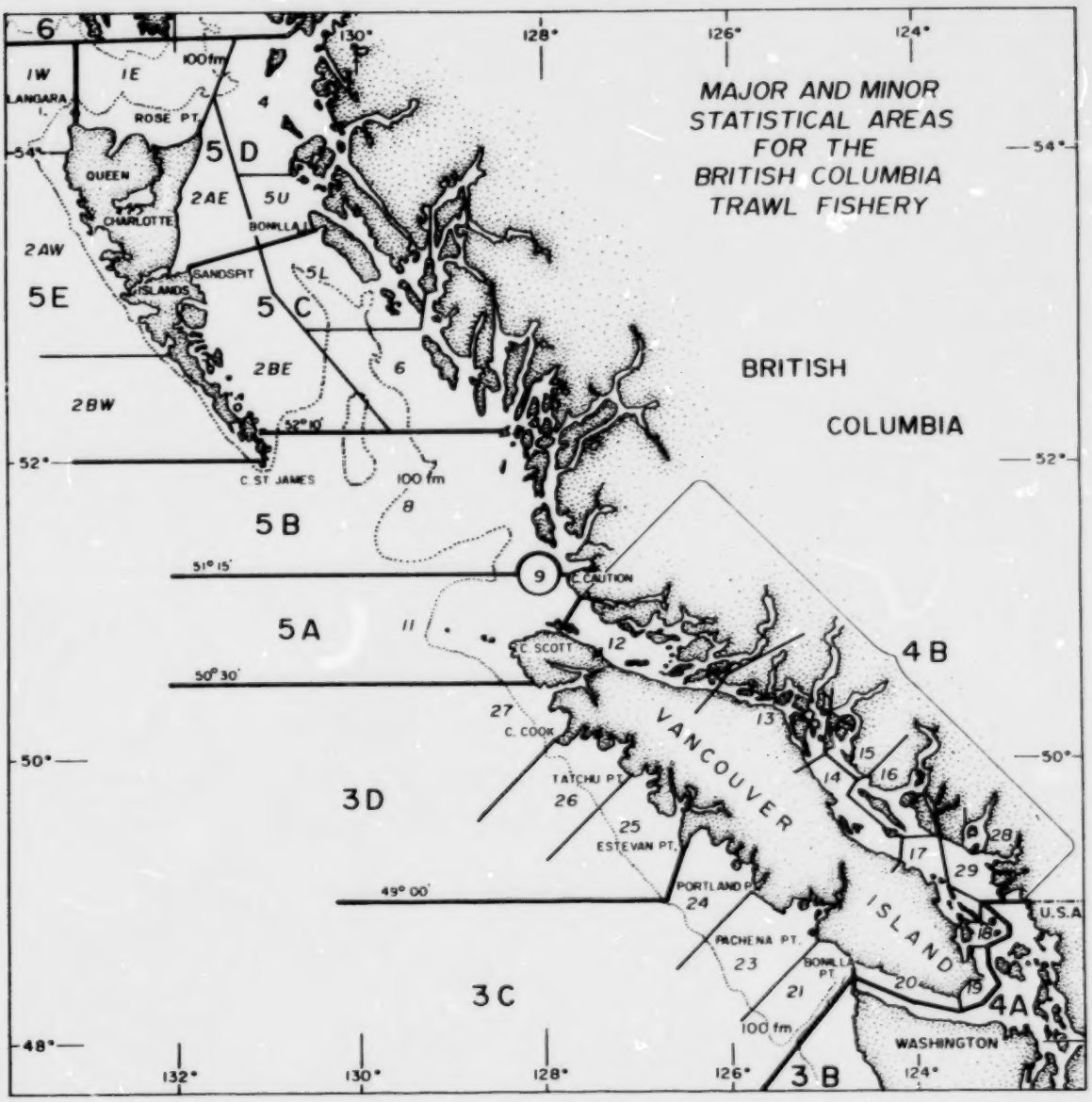
MAJOR AND MINOR
STATISTICAL AREAS
FOR THE
BRITISH COLUMBIA
TRAWL FISHERY
BRITISH
COLUMBIA
VANCOUVER
ISLAND
6
1W
LANGARA I.
1E
100fm
ROSE PT.
4
5D
QUEEN
CHARLOTTE
ISLANDS
2AE
5U
BONILLA I.
2AW
SANDSPIT
5L
5E
5C
2BE
6
2BW
52°10'
C. ST JAMES
100 fm
8
5B
51°15'
9
C. CAUTION
5A
11
C. SCOTT
12
4B
50°30'
27
C. COOK
13
15
14
16
TATCHU PT.
26
3D
25
ESTEVAN PT.
17
28
29
49°00'
PORTLAND PT.
24
U.S.A.
18
PACHENA PT.
23
BONILLA PT.
21
20
19
4A
3C
100 fm
WASHINGTON
3B
132°
130°
128°
126°
124°
54°
52°
50°
48°

Fig. 1

AREA 4B--STRAIT OF GEORGIA

The Canadian waters from the Bonilla-Tatoosh line inside to a line drawn north and south (Mag.) through Pine Island at the upper end of Queen Charlotte Strait. This area, defined simply as the Strait of Georgia, includes all Canadian inshore grounds of Juan de Fuca Strait, Johnstone and Queen Charlotte Straits, and Georgia Strait.

AREA 5A--SOUTH QUEEN CHARLOTTE SOUND

From the northern boundaries of Areas 4B and 3D to latitude 51° 15'N. This area includes all grounds incorporated in the Cape Scott Bank and a portion of the grounds in the gully between the Cape Scott Bank and the Goose Island Bank. It also includes catches from the Virgin Rocks ground.

AREA 5B--NORTH QUEEN CHARLOTTE SOUND

From latitude 51°15'N to latitude 52°00'N on the westward side to Cape St. James and from latitude 51°15'N to latitude 52°10'N on the eastward side of Cape St. James. This area includes all grounds associated with the Goose Island Bank and the remaining portion of the grounds in the gully between the Goose Island Bank and the Cape Scott Bank.

AREA 5C--SOUTH HECATE STRAIT

From latitude 52°10'N to a line drawn from Spit Point (Sandspit) on Moresby Island to the southern tip of Bonilla Island. This area includes the grounds known as the "Horseshoe" and "Ole Spot" in the central region of the Strait.

AREA 5D--NORTH HECATE STRAIT

From the northern boundary of Area 5C to latitude 54°40'N, limited to the westward by longitude 133°W across Dixon Entrance. This area includes the Two Peaks ground (northeast of Rose Spit), the Butterworth-Warrior edge, the Fingers (southwest of Archibald Island), the Oval Hill ground, the White Rock ground (northwest of Bonilla Island), the Skidegate Inlet ground, the Fife Point ground, the southwest Seal Rocks ground, and grounds in Dixon Entrance.

AREA 5E--WEST COAST QUEEN CHARLOTTE ISLANDS

From latitude 52°00'N to 54°40'N, limited to the eastward by longitude 133°W across Dixon Entrance.

AREA 6--ALASKA

Encompasses waters bounded on the south by latitude 54°40'N and on the west by longitude 147°W.

MINOR STATISTICAL AREA DIVISIONS

Minor areas are used to give more detailed information on region of capture of groundfish. They are areas within major areas and are basically the former Fisheries Management statistical areas with some modifications. Figure 2 illustrates the areas and the modifications are catalogued below:

1. Minor area 101 has been divided into two minor areas, 1E and 1W. This boundary lies along longitude 133°W.

2. Minor area 142 has been divided into two minor areas, 2AW and 2BW. This boundary lies along 52°40'N latitude.

3. The boundary between Area 102 and Area 104 has been shifted northwestward to Rose Spit. Area 4 was expanded to bring the whole of the "Two Peaks" and "Dundas" grounds within Area 4. This has meant the elimination of Areas 103 and 3xy.

4. Minor area 105 has been divided into two sub-areas, designated 5U and 5L. This boundary lies along the Sandspit-Bonilla Island line, which is the internationally agreed line of division between north and south Hecate Strait (Areas 5D and 5C).

5. The boundary between Areas 5D and 5C has been continued through Area 102 to divide it into two minor areas, 2AE and 2BE.

6. The southern boundary of Areas 102 and 106 has been shifted to lie along 52°10'N latitude to conform with the boundary between Areas 5C and 5B.

7. Area 8 has been expanded to include the whole of the Goose Island Bank. This has involved (a) shifting the northern boundary to 52°10'N latitude and eliminating Area 107, (b) shifting the southern boundary to 51°15'N latitude and elimination Areas 109 and 110, and (c) the elimination of Area 130, previously used for offshore catches in Queen Charlotte Sound. There is, in this report, no westward limit to Area 8.

8. Area 9 has been changed and is now a circle 12 mi in diameter surrounding the Sea Otter group and the Virgin Rocks ground. It is considered to be part of Area 5A.

9. Area 11 has been expanded to include all of the Cape Scott Bank. This has meant the elimination of Area 111 and the addition of part of Area 127 lying northward of 50°30'N latitude. This is to conform with the boundary between Areas 5A and 3D.

10. The western limit of Area 12 is now Bates Passage.

11. Areas 21, 23, 24, 25, 26, and 27 have been expanded to include Areas 121, 123, 124, 125, 126, and 127, respectively.

12. The boundary between Areas 24 and 25 has been shifted to lie along the boundary between Areas 3C and 3D.

13. The boundary between Areas 23 and 24 has been shifted northwards to Portland Point and it lies on a bearing 225° True. This is to bring the whole of the ground known as Firing Range (which formerly lay on the boundary between these two areas) entirely within Area 23.

All other minor areas remain the same as those defined by the Fisheries Management Statistical Chart.

The following shows the relationship between the major and minor areas:

Major areas		Minor areas
6	Alaska	Southeastern, Yakutat[1]
5E	West Coast Queen Charlotte Islands	1W, 2AW, 2BW
5D	North Hecate Strait	1E, 2AE, 4, 5U
5C	South Hecate Strait	2BE, 5L, 6
5B	North Queen Charlotte Sound	8
5A	South Queen Charlotte Sound	9, 11
3D	Northwest Coast Vancouver Island	27, 26, 25
3C	Southwest Coast Vancouver Island	24, 23, 21
3B	Northwest Washington Coast	"C"
4B	Strait of Georgia[2]	12, 13, 14, 15, 16, 17, 18, 19, 20, 28, 29

[1]Southeastern - from 54°40'N to 137°W. Yakutat from 137°W to 147°W.
[2]Including Johnstone and Queen Charlotte straits and the Canadian portion of the Strait of Juan de Fuca.

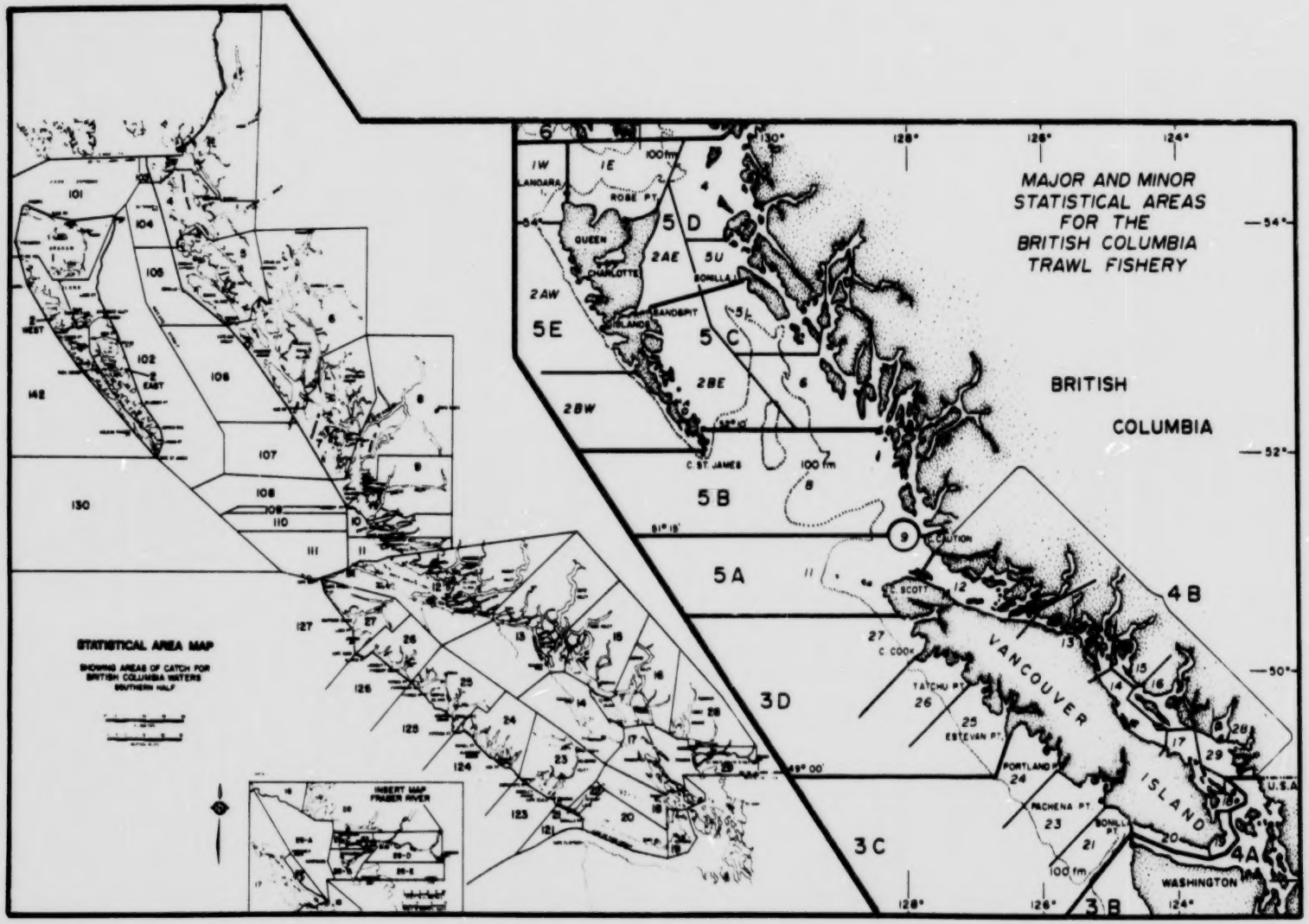
MAJOR AND MINOR STATISTICAL AREAS FOR THE BRITISH COLUMBIA TRAWL FISHERY
BRITISH COLUMBIA
VANCOUVER ISLAND
WASHINGTON
U.S.A.
STATISTICAL AREA MAP
SHOWING AREAS OF CATCH FOR BRITISH COLUMBIA WATERS SOUTHERN HALF
INSERT MAP FRASER RIVER
5E
5D
5C
5B
5A
3D
3C
3B
4B
4A
2AW
2AE
2BW
2BE
5U
1W
1E
ROSE PT.
QUEEN CHARLOTTE ISLANDS
C. ST. JAMES
C. SCOTT
C. COOK
YATCHU PT.
ESTEVAN PT.
PORTLAND
PACHENA PT.
SOMASS PT.
100 fm
54°
52°
50°
49° 00'
130°
128°
126°
124°

Fig. 2.

DOMESTIC TRAWL FISHERY

In 1987, catch and effort data were collected by port liason officers for 86%, by weight, of the total trawl landings. Through the cooperation of the Statistics Division, Fisheries Branch, the remaining 14% of the landings were recorded from sales slips, from which no effort (hours fished) is available. Catch-per-unit-effort (CPUE) statistics obtained from the interview data were used to estimate the effort expended for the catch reported on these sales slips.

From total landed catch and total estimated effort data, an average CPUE (t/h) was calculated for each major fishing area. Also calculated was the percentage of total catch and effort expended in each of these areas. These last two statistics show relative importance of each area and are used in the calculation of the "success ratio". This parameter is defined as the percent of the total catch divided by the percent of the total effort.

Total landings in 1987 (excluding dumped[3] and discarded[4] fish) by the British Columbia domestic trawl fleet were 60,518 t, 35% above the total for 1986. Effort expended increased 23% to 42,915 hours resulting in an overall CPUE of 1.410 t/h, 10% above the 1986 rate.

Pacific cod was the strongest contributor to the trawl fishery with landings of 13,896 t, more than triple the amount landed in 1986. Pacific hake rose 95% from 1986 levels to 13,275 t in 1987. Total rockfish landings were 22,849 t and accounted for 38% of the total trawl landings. Landings of pollock (1,270 t) more than doubled the 1986 catch. Rock sole landings increased 95% to 887 t. There were also marked increases in landings of English sole (754 t), turbot (1,193 t), canary rockfish (1,415 t), widow rockfish (1,028 t), redbanded rockfish (207 t), splitnose rockfish (90 t), and darkblotched rockfish (87 t). Dover sole (633 t) landings dropped 46%, dogfish (1,423 t) landings dropped 39% , and rougheye rockfish (490 t) landings dropped 35%. There were also marked decreases in landings of lingcod (2,401 t), silvergray rockfish (2,788 t), yellowmouth rockfish (1,857 t) and sablefish (407 t).

Annual trawl catch and effort data are shown in Tables 2-7. Landings by major area, month and species are presented in Tables 8-15. Landings by minor area, month and species are given in Tables 16-43.

---

[3]Fish caught and retained but eventually rejected at the plant as being unsuitable for any utilization.

[4]Fish caught and discarded at sea by fishermen.

AREA 4B--STRAIT OF GEORGIA

This area contributed 20% of the total British Columbia trawl production. A 6% increase in the amount of effort expended (6,012 h) with a 72% increase in landings (12,000 t) resulted in an increased CPUE of 1.996 t/h. Hake accounted for 76% of the catch. Pacific cod, pollock and dogfish were the other main species.

AREA 3C--SOUTHWEST COAST OF VANCOUVER ISLAND

There was an 8% increase in the amount of effort expended (5,669 h) with a 16% increase in landings (8,508 t) resulting in an increased CPUE of 1.501 t/h. Hake landings of 4,170 t more than doubled and accounted for 49% of the catch from this area. Dogfish was the other main species.

AREA 3D--NORTHWEST COAST OF VANCOUVER ISLAND

The landings (6,677 t) for this area decreased 27%, the amount of effort expended (4,249 h) decreased 26% and CPUE decreased slightly to 1.571 t/h. Rockfish landings of 6,334 t, of which yellowtail rockfish (1,982 t), redstripe rockfish (840 t), widow rockfish (720 t), yellowmouth rockfish (703 t) and Pacific ocean perch (652 t) were the dominant species, accounted for 95% of the total catch.

AREA 5A--SOUTH QUEEN CHARLOTTE SOUND

Total landings (6,545 t) increased 95% and total effort expended (7,508 h) increased 78%, resulting in an increased CPUE of 0.872 t/h. Pacific cod (1,607 t), silvergray rockfish (680 t), lingcod (675 t), yellowtail rockfish (630 t) and redstripe rockfish (591 t) were the major species caught in this area.

AREA 5B--NORTH QUEEN CHARLOTTE SOUND

Total landings (8,695 t), total effort expended (6,932 h) and CPUE (1.254 t/h) increased substantially over 1986 levels. Pacific ocean perch (2,595 t) landings were more than triple those of the previous year. Pacific

cod landings increased from 67 t in 1986 to 1,629 t in 1987. The other main species taken were yellowtail rockfish (918 t), silvergray rockfish (807 t) and lingcod (756 t).

AREA 5C--SOUTH HECATE STRAIT

The amount of effort expended (3,323 h) in this area was more than double and the landings (4,627 t) were more than triple those seen in 1986. This resulted in a 48% increase in CPUE (1.393 t/h). Pacific cod landings (2,533 t) were 7.5 times greater than in 1986. Silvergray rockfish (483 t) and Pacific ocean perch (410 t) were the other main species.

AREA 5D--NORTH HECATE STRAIT

Both total landings (8,922 t) and total effort expended (6,548 h) showed increases, 131% and 74%, respectively. This resulted in an increased CPUE (1.363 t/h). Pacific cod landings of 6,298 t were more than triple the 1986 level and represented 71% of the landings from this area. Turbot (641 t) and English sole (520 t) were the other main species caught.

AREA 5E--WEST COAST OF QUEEN CHARLOTTE ISLANDS

There was a 38% decline in the amount of effort expended (2,674 h) and a 46% decline in the total landings (4,544 t). This resulted in a lower CPUE (1.699 t/h) than in 1986. Total rockfish landings of 4,215 t accounted for 93% of the total catch. Pacific ocean perch (1,785 t), redstripe rockfish (853 t), yellowmouth rockfish (560 t) and rougheye rockfish (476 t) were the dominant species.

The following species were observed in trawl landings in British Columbia in 1987.

Family and common name	Scientific name
FISHES	
Acipenseridae	
Green sturgeon	Acipenser medirostris Ayres
Anarhichadidae	
Wolf-eel	Anarrhichthys ocellatus Ayres
Anoplopomatidae	
Sablefish	Anoplopoma fimbria (Pallas)
Bothidae	
Pacific sanddab	Citarichthys sordidus (Girard)
Clupeidae	
American shad	Alosa sapidissima (Wilson)
Embiotocidae	
Pile perch	Rhacochilus vacca (Girard)
Gadidae	
Pacific cod, true cod or gray cod	Gadus macrocephalus Tilesius
Pacific hake	Merluccius productus (Ayres)
Walleye pollock	Theragra chalcogramma (Pallas)
Hexagrammidae	
Lingcod	Ophiodon elongatus Girard
Hexanchidae	
Sixgill shark	Hexanchus griseus (Bonnaterre)
Pleuronectidae	
Arrowtooth flounder or turbot	Atheresthes stomias (Jordan and Gilbert)
Petrale sole	Eopsetta jordani (Lockington)
Rex sole	Glyptocephalus zachirus Lockington
Flathead sole	Hippoglossoides elassodon Jordan and Gilbert)
Rock sole	Lepidopsetta bilineata (Ayres)
Dover sole	Microstomus pacificus (Lockington)
English sole	Parophrys vetulus Girard
Starry flounder	Platichthys stellatus (Pallas)
Sand sole	Psettichthys melanostictus Girard

Family and common name	Scientific name
Rajidae	
Big skate	Raja binoculata Girard
Longnose skate	Raja rhina Jordan and Gilbert
Scorpaenidae	
Rougheye rockfish	Sebastes aleutianus (Jordan and Evermann)
Pacific ocean perch	Sebastes alutus (Gilbert)
Redbanded rockfish	Sebastes babcocki (Thompson)
Shortraker rockfish	Sebastes borealis Barsukov
Silvergray rockfish	Sebastes brevispinis (Bean)
Copper rockfish	Sebastes caurinus Richardson
Dusky rockfish	Sebastes ciliatus (Tilesius)
Darkblotched rockfish	Sebastes crameri (Jordan)
Splitnose rockfish	Sebastes diploproa (Gilbert)
Greenstriped rockfish	Sebastes elongatus Ayres
Widow rockfish	Sebastes entomelas (Jordan and Gilbert)
Yellowtail rockfish	Sebastes flavidus (Ayres)
Rosethorn rockfish	Sebastes helvomaculatus Ayres
Quillback rockfish	Sebastes maliger (Jordan and Gilbert)
Black rockfish	Sebastes melanops Girard
China rockfish	Sebastes nebulosus Ayres
Tiger rockfish	Sebastes nigrocinctus Ayres
Bocaccio	Sebastes paucispinis Ayres
Canary rockfish	Sebastes pinniger (Gill)
Redstripe rockfish	Sebastes proriger (Jordan and Gilbert)
Yellowmouth rockfish	Sebastes reedi (Westrheim and Tsuyuki)
Yelloweye rockfish	Sebastes ruberrimus (Cramer)
Harlequin rockfish	Sebastes variegatus Quast
Sharpchin rockfish	Sebastes zacentrus (Gilbert)
Shortspine thornyhead	Sebastolobus alascanus Bean
Squalidae	
Spiny dogfish	Squalus acanthias Linnaeus
INVERTEBRATES	
Cancridae	
Dungeness crab	Cancer magister Dana
Octopoda	
Octopus or devilfish	Octopus sp.
Pectinidae	
Scallop	Scallop sp.
Teuthoidea	
Squid	Loligo opalescens Berry

Table 2. Total catch (t) (excludes dumped and discarded fish) and related effort[a] (h) for the British Columbia trawl fleet in 1987.

Month	Major Area									
	4B		3C		3D		5A		5B	
	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort
January	88.09	339	260.55	175	337.18	443	179.42	107	326.07	176
February	622.56	507	386.97	82	379.27	297	395.38	122	197.93	118
March	3114.05	1059	96.81	375	652.93	527	523.45	192	210.61	113
April	3753.82	634	413.60	185	1151.73	414	439.98	430	1134.62	837
May	2123.62	594	734.39	846	552.33	282	712.00	940	1366.96	956
June	252.73	284	1494.79	1178	209.57	236	1205.87	1510	1758.44	1423
July	347.89	219	1172.81	920	265.05	179	1375.71	1637	1318.88	1274
August	190.18	276	1363.13	878	300.50	223	368.48	551	698.54	582
September	238.00	424	721.95	346	639.53	310	418.47	700	872.32	861
October	555.65	590	1466.65	479	1109.85	675	593.34	952	451.15	332
November	417.14	579	361.83	170	965.79	577	256.86	275	342.18	240
December	296.74	507	34.07	35	113.27	86	76.05	92	17.64	20
Total	12000.47	6012	8507.55	5669	6677.00	4249	6545.01	7508	8695.12	6932
CPUE (t/h)	1.996		1.501		1.571		0.872		1.254	
% catch	19.83		14.06		11.03		10.81		14.37	
% effort	14.01		13.21		9.90		17.50		16.15	
Success ratio	1.42		1.06		1.11		0.62		0.89	

[a]This effort was prorated using the known CPUE obtained from interviews which accounted for 86% of the total catch.

Table 2 (cont'd)

	Major Area							
	5C		5D		5E		Total	
Month	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort
January	80.83	93	443.87	418	442.86	247	2158.87	1998
February	112.81	99	640.12	834	775.03	358	3510.07	2417
March	382.06	225	895.24	755	820.52	541	6695.67	3787
April	436.26	256	900.78	845	547.00	286	8777.79	3887
May	633.47	477	879.96	694	773.18	604	7775.91	5393
June	483.40	348	1253.46	589	492.40	373	7150.66	5941
July	394.52	334	1015.48	433	73.10	5	5963.35	5001
August	141.41	83	695.21	324	313.00	126	4070.45	3043
September	261.13	246	782.31	408	34.23	6	3967.94	3301
October	1182.01	684	749.88	522	141.40	72	6249.93	4306
November	440.67	410	597.69	635	111.79	50	3493.95	2936
December	78.92	68	68.24	91	19.18	6	704.11	905
Total	4627.49	3323	8922.24	6548	4543.60	2674	60,518.48	42,915
CPUE (t/h)	1.393		1.363		1.699		1.410	
% catch	7.65		14.74		7.51			
% effort	7.74		15.26		6.23			
Success ratio	0.99		0.97		1.21			

Table 3. Total British Columbia trawl landings (t) by main species and major area in 1987 (excluding dumped and discarded fish).

Species	Major Area								
	4B	3C	3D	5A	5B	5C	5D	5E	Total
English sole	17.26	62.98	2.84	26.84	22.39	101.96	520.10	0.12	754.49
Rock sole	5.47	62.02	1.07	80.21	205.43	209.06	323.64	-	886.90
Petrale sole	0.63	122.54	37.38	96.28	67.90	53.31	47.90	19.51	445.45
Dover sole	14.60	25.33	12.65	36.21	42.00	27.77	327.19	147.60	633.35
Rex sole	0.46	-	-	0.28	0.93	4.59	73.22	3.45	82.93
Starry flounder	9.78	0.92	0.29	6.45	-	9.12	38.91	-	65.47
Turbot	1.19	37.86	9.22	316.55	113.66	62.99	640.85	10.77	1,193.09
Other flatfish[a]	151.97	34.07	3.99	19.22	8.50	-	7.94	-	225.69
Pacific cod	1,014.64	746.85	62.52	1,607.05	1,629.19	2,533.15	6,298.14	4.55	13,896.09
Lingcod	17.04	492.21	87.94	675.38	755.77	180.01	186.43	5.83	2,400.61
Sablefish	3.49	185.10	58.13	9.70	36.27	7.30	28.32	78.66	406.97
Pollock	1,230.81	0.18	0.49	28.90	5.24	0.30	3.64	-	1,269.56
Hake	9,104.79	4,170.41	-	-	-	-	-	-	13,275.20
Pacific ocean perch	0.02	340.33	652.43	546.94	2,595.39	410.29	4.00	1,784.64	6,334.04
Other rockfish[a]	14.75	1,238.69	5,713.31	2,983.04	3,053.98	982.63	98.84	2,429.99	16,515.23
Misc. species[a]	16.62	11.53	0.35	10.10	79.76	33.50	162.23	0.50	314.59
Dogfish	353.35	969.50	29.00	65.90	1.60	0.91	2.49	-	1,422.75
Animal food[a]	0.06	-	2.63	5.29	19.05	1.66	107.77	49.16	185.62
Reduction[a]	43.54	7.03	2.76	30.67	58.06	8.94	50.63	8.82	210.45
Total	12,000.47	8,507.55	6,677.00	6,545.01	8,695.12	4,627.49	8,922.24	4,543.60	60,518.48
Effort	6,012	5,669	4,249	7,508	6,932	3,323	6,548	2,674	42,915

[a]Refer to Table 6 for breakdown by species

Table 4. British Columbia midwater trawl[a] landings (t) by species and major area in 1987.

Species	Major Area						Total
	4B	3C	3D	5A	5B	5D	
Turbot	-	-	0.63	-	-	-	0.63
Pacific cod	-	-	0.66	-	-	-	0.66
Lingcod	-	-	1.89	-	-	-	1.89
Pollock	1,212.33	-	-	-	-	1.17	1,213.50
Hake	9,104.17	4,170.41	-	-	-	-	13,274.58
Ocean perch	-	0.26	15.89	0.02	1.39	-	17.56
Other rockfish	1.20	332.45	1,850.51	66.43	62.17	1.06	2,313.82
Dogfish	152.26	-	-	-	-	-	152.26
Animal food	-	-	2.63	-	-	0.07	2.70
Reduction	43.52	-	-	-	-	-	43.52
Total	10,513.48	4,503.12	1,872.21	66.45	63.56	2.30	17,021.12

[a]These midwater trawl catches are included in all the trawl tables in this report.

Table 5. British Columbia midwater[a] trawl landings (t) and related effort[b] (h) in 1987.

Month	Major Area									
	4B		3C		3D		5A		5B	
	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort
January	-	-	33.82	31	82.85	125	2.25	4	-	-
February	524.35	148	23.01	19	114.68	107	-	-	-	-
March	2,992.11	532	6.22	15	116.47	117	-	-	-	-
April	3,704.93	525	-	4	58.94	51	-	-	-	-
May	2,045.62	144	-	-	45.36	33	60.99	32	62.11	32
June	193.74	21	721.63	63	27.11	21	-	-	1.45	6
July	275.30	17	680.66	98	44.50	27	-	-	-	-
August	81.44	9	871.29	82	83.26	20	-	-	-	-
September	124.68	12	631.15	74	244.41	82	-	-	-	-
October	400.45	45	1,228.34	117	538.05	234	3.21	10	-	-
November	170.86	53	307.00	25	477.92	293	-	3	-	3
December	-	-	-	-	38.66	26	-	-	-	-
Total	10,513.48	1,506	4,503.12	528	1,872.21	1,136	66.45	49	63.56	41

[a]Midwater trawl catch and effort are included in all the trawl tables in this report.
[b]This effort was prorated using the known CPUE obtained from interviews which accounted for 89% of the midwater trawl catch.

Table 5 (cont'd)

Month	Major Area					
	5C		5D		Total	
	Catch	Effort	Catch	Effort	Catch	Effort
January	-	-	2.30	7	121.22	167
February	-	-	-	-	662.04	274
March	-	-	-	-	3,114.80	664
April	-	-	-	-	3,763.87	580
May	-	-	-	-	2,214.08	241
June	-	-	-	-	943.93	111
July	-	-	-	-	1,000.46	142
August	-	-	-	-	1,035.99	111
September	-	-	-	-	1,000.24	168
October	-	2	-	-	2,170.05	408
November	-	-	-	-	955.78	377
December	-	-	-	-	38.66	26
Total	-	2	2.30	7	17,021.12	3,269

Table 6. Species landed (t) as "other flatfish", "other rockfish", "miscellaneous species", "animal food" and "reduction" by major area in 1987.

Species	Major Area								
	4B	3C	3D	5A	5B	5C	5D	5E	Total
Other flatfish									
Flathead sole	1.07	-	-	-	-	-	-	-	1.07
Pacific dab	-	-	-	0.33	-	-	-	-	0.33
Sand sole	7.94	0.02	-	-	-	-	-	-	7.96
Unspecified	142.96	34.05	3.99	18.89	8.50	-	7.94	-	216.33
Total	151.97	34.07	3.99	19.22	8.50	-	7.94	-	225.69
Other rockfish									
Black rockfish	-	0.34	-	-	-	-	-	-	-
Bocaccio	-	33.19	173.40	165.78	246.38	57.77	22.96	5.39	704.87
Canary rockfish	-	222.88	512.44	182.46	381.79	90.81	12.06	12.60	1415.04
China rockfish	0.06	-	-	-	0.05	0.01	0.08	-	0.20
Copper rockfish	-	-	-	-	-	0.08	2.43	-	2.51
Darkblotched rockfish	-	8.37	18.26	0.84	11.94	2.71	-	44.55	86.67
Dusky rockfish	-	-	-	-	-	-	-	0.89	0.89
Greenstriped rockfish	-	2.04	0.83	-	-	2.71	-	0.04	5.62
Harlequin rockfish	-	-	-	-	-	-	-	0.38	0.38
Quillback rockfish	0.53	0.01	-	0.44	-	0.32	3.94	-	5.24
Redbanded rockfish	-	7.10	20.76	38.27	115.21	13.97	0.91	10.69	206.91
Redstripe rockfish	0.18	231.43	840.49	590.87	267.92	96.47	-	853.24	2880.60
Rosethorn rockfish	-	-	-	1.36	-	-	-	-	1.36
Rougheye rockfish	-	0.85	4.69	0.83	3.96	2.02	1.37	475.98	489.70
Sharpchin rockfish	-	14.13	118.33	102.53	25.30	21.18	-	63.21	344.68
Shortraker rockfish	-	0.65	1.85	1.08	1.95	0.03	-	10.88	16.44
Shortspine thornyhead	-	2.54	3.03	1.97	4.25	1.62	1.98	50.14	65.53
Silvergray rockfish	-	156.20	447.45	680.43	806.97	482.59	16.14	198.09	2787.87
Splitnose rockfish	-	0.41	52.82	4.08	27.05	5.01	-	0.36	89.73
Tiger rockfish	-	-	-	-	0.80	-	-	-	0.80

Table 6 (cont'd)

Species	Major Area								
	4B	3C	3D	5A	5B	5C	5D	5E	Total
Other rockfish (cont'd)									
Widow rockfish	0.54	10.45	720.03	89.12	125.84	18.90	0.03	62.82	1027.73
Yelloweye rockfish	0.35	5.46	6.04	6.22	5.26	8.62	-	-	31.95
Yellowmouth rockfish	-	7.11	702.68	438.80	81.58	67.34	0.16	559.51	1857.18
Yellowtail rockfish	6.79	500.72	1982.26	629.54	917.81	63.76	21.08	46.48	4168.44
Unspecified	6.30	34.81	107.95	48.42	29.92	46.71	15.70	34.74	324.55
Total	14.75	1238.69	5713.31	2983.04	3053.98	982.63	98.84	2429.99	16,515.23
Miscellaneous species									
Octopus	1.41	0.22	0.03	0.59	0.88	2.98	14.91	0.02	21.04
Perch	0.45	-	-	-	-	-	-	-	0.45
Scallop	0.02	-	-	-	-	-	-	-	0.02
Shad	0.01	-	-	-	-	-	-	-	0.01
Shark	0.01	-	-	0.22	-	-	-	-	0.23
Skate wings	13.88	10.73	0.32	8.59	78.85	30.52	147.31	0.23	290.43
Squid	-	-	-	-	0.03	-	-	0.25	0.28
Sturgeon	0.02	0.15	-	0.62	-	-	0.01	-	0.80
Wolf-eel	0.06	0.12	-	0.02	-	-	-	-	0.20
Unspecified	0.76	0.31	-	0.06	-	-	-	-	1.13
Total	16.62	11.53	0.35	10.10	79.76	33.50	162.23	0.50	314.59

Table 6 (cont'd)

Species	Major Area								
	4B	3C	3D	5A	5B	5C	5D	5E	Total
Animal food									
Ocean perch	-	-	-	-	-	-	-	5.99	5.99
Skate wings	-	-	-	-	-	-	0.68	-	0.68
Turbot	-	-	-	-	-	-	-	4.61	4.61
Unspecified	0.06	-	2.63	5.29	19.05	1.66	107.09	38.56	174.34
Total	0.06	-	2.63	5.29	19.05	1.66	107.77	49.16	185.62
Reduction									
Dogfish	15.07	2.61	-	-	-	-	-	-	17.68
English sole	-	-	-	-	-	-	8.16	-	8.16
Hake	21.82	-	-	-	-	-	-	-	21.82
Lingcod	-	-	-	-	-	-	0.24	-	0.24
Other rockfish	-	-	-	-	28.25	-	0.21	-	28.46
Pacific cod	-	0.06	-	5.72	-	-	38.43	-	44.21
Petrale sole	-	-	-	-	-	-	0.04	-	0.04
Pollock	6.63	-	-	-	-	-	-	-	6.63
Rock sole	-	-	-	-	-	-	3.41	-	3.41
Skate wings	-	-	-	-	-	-	0.14	-	0.14
Unspecified	0.02	4.36	2.76	24.95	29.81	8.94	-	8.82	79.66
Total	43.54	7.03	2.76	30.67	58.06	8.94	50.63	8.82	210.45

Table 7. British Columbia trawl landings (t) by species and minor area in 1987.

Species	Minor area						
	12	13	14	15	16	17	18
English sole		.07	.36			7.59	4.56
Rock sole		.01	3.96			.66	.50
Petrale sole						.16	
Dover sole			.06			.04	.47
Rex sole			.46				
Flathead sole	1.07						
Sand sole	7.94						
Turbot							.03
Starry flounder	5.16		.59	.12		2.67	1.22
Other flatfish	1.42	.04	5.75	.09	.32	37.04	45.22
Pacific cod	.05	41.64	158.96		2.20	34.10	163.16
Lingcod	.08		.42	.01		1.74	1.10
Sablefish		.16	1.94				.07
Pollock					225.23	398.57	25.31
Pacific ocean perch			.02				
Bocaccio							
Canary rockfish							
Redstripe r'fish			.04				
Rougheye r'fish							
Silvergray r'fish							
Yellowmouth r'fish							
Yellowtail r'fish		.01			.11	2.50	
Widow r'fish			.54				
Other r'fish	.03	.14	1.57	.01		.98	1.86
Hake			792.55		102.73	1421.89	.31
Octopus	.01	.01	.11			.10	.56
Perch	.02		.09			.03	.24
Skate wings	1.32	.01	1.42	.07	.04	1.51	4.26
Squid							
Sturgeon							
Misc. species					.02	.23	.46
Dogfish		5.64	59.53			13.72	56.86
Reduction			.73			24.83	
Animal food							.06
Total	17.10	47.73	1029.10	.30	330.65	1948.36	306.25
Crab						.05	.08
Dumped fish							
Discards	1.81	2.59	65.07	.09		30.02	5.18

Table 7 (cont'd)

Species	Minor area						
	19	20	29	21	23	24	25
English sole	2.75	1.91		7.27	50.59	5.12	1.18
Rock sole	.35			1.84	58.10	2.08	
Petrale sole	.24	.24		7.38	99.93	15.22	19.73
Dover sole	.32	13.72		5.28	14.21	5.84	6.48
Rex sole							
Flathead sole							
Sand sole					.02		
Turbot	.44	.73		10.18	25.87	1.81	4.22
Starry flounder				.01	.56	.37	.07
Other flatfish	10.23	42.67	.17	8.91	21.79	3.34	2.61
Pacific cod	531.18	82.82	.54	164.70	569.65	12.50	14.45
Lingcod	9.24	4.44		22.58	438.47	31.16	23.74
Sablefish	.02	1.31		75.46	99.87	9.76	19.09
Pollock	1.71		579.99	.18			.49
Pacific ocean perch				102.08	98.56	139.70	201.94
Bocaccio				11.39	4.90	16.90	68.49
Canary rockfish				43.87	88.62	90.39	328.01
Redstripe r'fish	.14			130.28	56.89	44.25	145.70
Rougheye r'fish						.85	2.61
Silvergray r'fish				15.79	64.47	75.94	226.22
Yellowmouth r'fish				2.89	1.58	2.65	3.94
Yellowtail r'fish	.02	4.14		134.09	200.96	165.65	1727.12
Widow r'fish				3.91	1.70	4.84	586.25
Other r'fish	2.20	.44		24.34	16.54	34.99	89.40
Hake	.28	935.29	5851.74	2874.68	1295.75		
Octopus	.42	.22		.13	.05	.04	
Perch	.07						
Skate wings	3.63	1.63		.87	8.71	1.14	.07
Squid							
Sturgeon		.02		.03	.09	.03	
Misc. species	.07	.06		.12	.19	.12	
Dogfish	70.74	8.22	138.65	1.27	923.26	44.97	1.87
Reduction	.02		17.97		7.01	.02	2.76
Animal food							.96
Total	634.07	1097.86	6589.06	3649.53	4148.34	709.68	3477.40
Crab						.02	
Dumped fish	.04						
Discards	34.17	16.17		60.91	821.70	36.31	104.85

Table 7 (cont'd)

Species	Minor area						
	26	27	11	8	2BE	5L	6
English sole	.29	1.39	26.85	22.40	72.01	28.64	1.31
Rock sole	.39	.69	80.22	205.41	136.78	71.20	1.09
Petrale sole	4.96	12.69	96.28	67.93	32.69	19.47	1.14
Dover sole	.19	5.98	36.22	42.01	18.99	6.64	2.14
Rex sole			.28	.91	3.22	1.36	
Flathead sole							
Sand sole							
Turbot	1.10	3.91	316.55	113.66	53.59	9.38	
Starry flounder		.22	6.45		9.13		
Other flatfish	.16	1.22	19.23	8.50			
Pacific cod	6.09	41.98	1607.04	1629.19	2223.07	290.72	19.36
Lingcod	15.72	48.47	675.38	755.78	136.07	36.75	7.19
Sablefish	2.21	36.83	9.69	36.26	1.05	6.23	.01
Pollock			28.90	5.24	.30		
Pacific ocean perch	19.59	430.90	546.93	2595.39	359.92	26.53	23.85
Bocaccio	31.31	73.60	165.78	246.38	37.91	17.89	1.97
Canary rockfish	74.18	110.24	182.46	381.79	50.17	35.47	5.17
Redstripe r'fish	45.23	649.57	590.86	267.92	84.31	3.83	8.33
Rougheye r'fish	.17	1.91	.83	3.96	2.02		
Silvergray r'fish	71.61	149.62	680.44	806.98	431.75	31.02	19.81
Yellowmouth r'fish	.90	697.84	438.80	81.58	62.55	4.80	
Yellowtail r'fish	145.17	109.97	629.55	917.81	29.20	28.52	6.04
Widow r'fish	47.35	86.43	89.12	125.84	2.44	15.94	.52
Other r'fish	8.76	231.69	205.20	221.72	92.62	10.12	.24
Hake							
Octopus	.01	.01	.59	.88	2.04	.94	
Perch							
Skate wings		.25	8.59	78.84	29.36	.46	.71
Squid				.03			
Sturgeon			.62				
Misc. species			.30				
Dogfish		27.13	65.89	1.60	.91		
Reduction			30.67	58.05	4.46	4.48	
Animal food	1.67		5.29	19.06	1.66		
Total	477.06	2722.54	6545.01	8695.12	3878.22	650.39	98.88
Crab							
Dumped fish	1.46						
Discards	.86	74.25	201.20	325.34	83.33	14.29	

Table 7 (cont'd)

Species	Minor area						
	2AE	1E	4	5U	1W	2AW	2BW
English sole		6.11	358.14	155.84	.12		
Rock sole		14.69	128.33	180.63			
Petrale sole		.23	7.65	40.03	7.87	10.85	.78
Dover sole		5.94	287.81	33.44	64.83	82.68	.09
Rex sole		1.83	64.84	6.56	3.19	.25	
Flathead sole							
Sand sole							
Turbot			618.76	22.09	1.52	9.26	
Starry flounder		14.51	24.37	.02			
Other flatfish			.68	7.26			
Pacific cod	8.83	19.07	3061.45	3208.77	3.07	1.42	.05
Lingcod		6.21	140.05	40.16	2.56	3.27	
Sablefish			10.71	17.60	29.37	49.22	.06
Pollock		.03	3.52	.11			
Pacific ocean perch		3.55	.45		1129.70	468.75	186.20
Bocaccio		4.20	1.99	16.77	.66	4.24	.50
Canary rockfish			11.08	.98	.90	11.68	.02
Redstripe r'fish					224.29	627.83	1.12
Rougheye r'fish			1.37		179.86	295.52	.59
Silvergray r'fish		1.24	1.11	13.79	84.87	98.10	15.12
Yellowmouth r'fish			.16		108.91	432.90	17.69
Yellowtail r'fish		2.04	10.87	8.16	5.80	39.96	.72
Widow r'fish				.03	3.93	58.20	.69
Other r'fish		.14	6.75	18.16	141.27	64.44	10.19
Hake							
Octopus		.04	3.66	11.21		.02	
Perch							
Skate wings		7.18	127.31	12.82	.23		
Squid					.26		
Sturgeon				.01			
Misc. species							
Dogfish			.19	2.30			
Reduction	.05	2.15	5.45	42.99	6.64	2.18	
Animal food			103.47	4.30	21.66	27.50	
Total	8.88	89.16	4980.17	3844.03	2021.51	2288.27	233.82
Crab							
Dumped fish							
Discards		2.27	404.81	229.16	9.30		.27

Table 7 (cont'd)

Species	Total
English sole	754.49
Rock sole	886.90
Petrale sole	445.45
Dover sole	633.35
Rex sole	82.93
Flathead sole	1.07
Sand sole	7.96
Turbot	1,193.09
Starry flounder	65.47
Other flatfish	216.63
Pacific cod	13,896.09
Lingcod	2,400.61
Sablefish	406.97
Pollock	1,269.56
Pacific ocean perch	6,334.04
Bocaccio	704.87
Canary rockfish	1,415.04
Redstripe r'fish	2,880.60
Rougheye r'fish	489.70
Silvergray r'fish	2,787.87
Yellowmouth r'fish	1,857.18
Yellowtail r'fish	4,168.44
Widow r'fish	1,027.73
Other r'fish	1,179.28
Hake	13,275.20
Octopus	21.04
Perch	0.71
Skate wings	290.43
Squid	0.28
Sturgeon	0.80
Misc. species	1.57
Dogfish	1,422.75
Reduction	210.45
Animal food	185.62
Total	60,518.48
Crab	0.15
Dumped fish	4.09
Discards	2,463.54

Tables of monthly catch (t) by major area

TABLE 8. 1987 BRITISH COLUMBIA TRAWL LANDINGS (MT) OF GROUNDFISH - INTERNATIONAL AREA 4B STRAIT OF GEORGIA.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	3.54	3.00	1.86	1.88	.24	.13	.05	.37	1.23	3.60	1.14	.22	17.26
ROCK S.	1.44	.31	.16		.66	.07				1.42	1.40	.01	5.47
PETRALE S.		.09	.02				.03	.11	.01	.37			.63
DOVER S.		.53	.20	.75		1.03	8.50	3.05	.16	.06	.30	.02	14.60
REX SOLE	.46										.51		.46
STARRY FLDR		3.86	3.06	1.36		.87	.12						9.78
TURBOT		.01	.03			.18	.42	.17	.13	.23	.02		1.19
OTHER FLAT.	15.07	11.01	15.50	13.94	14.46	10.65	8.18	11.45	14.88	20.01	10.92	5.90	151.97
PACIFIC COD	57.83	76.60	88.73	25.31	57.04	39.76	31.10	56.33	62.64	72.45	209.81	237.04	1014.64
LINGCOD				.35	1.69	1.17	1.69	4.66	4.07	2.81	.56	.04	17.04
SABLEFISH		.01	.01		.09	.27	2.28	.73	.06		.01	.03	3.49
POLLOCK	2.78	226.12	885.49	45.23	.01	.01		.01			70.00	1.16	1230.81
HAKE	.10	284.76	2012.02	3574.47	2043.53	193.52	274.89	80.98	124.68	400.73	115.11		9104.79
OCEAN PERCH										.02			.02
OTHER ROCKF.	.04	.22	.71	1.04	1.13	.98	.75	1.67	.89	4.39	.84	2.09	14.75
MISC. SP.	.58	2.08	3.16	2.05	1.76	.87	1.00	.79	1.22	1.45	1.18	.48	16.62
DOGFISH	6.25	13.96	74.30	74.81	.92	3.22	18.88	29.86	28.02	48.05	5.33	49.75	353.35
ANIMAL FOOD										.06			.06
REDUCTION			28.80	12.63	2.09				.01		.01		43.54
TOTAL	88.09	622.56	3114.05	3753.82	2123.62	252.73	347.89	190.18	238.00	555.65	417.14	296.74	12000.47

TABLE 9. 1987 BRITISH COLUMBIA TRAWL LANDINGS (MT) OF GROUNDFISH - INTERNATIONAL AREA 3C SOUTHWEST COAST VANCOUVER ISLAND.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.01	.16	.64	3.90	15.21	11.38	9.33	9.77	5.23	7.04	.28	.03	62.98
ROCK S.	.07		.05	4.27	5.39	14.94	4.25	3.79	2.75	26.13	.38		62.02
PETRALE S.	5.82	.03	.09	.46	9.93	23.30	31.92	28.80	12.31	7.72	1.34	.82	122.54
DOVER S.				1.88	1.23	8.88	3.13	6.34	.98	2.28	.59	.02	25.33
REX SOLE													
STARRY FLDR			.13	.05		.38	.06				.30		.92
TURBOT			.01		1.91	10.03	20.02	5.34	.14	.41			37.86
OTHER FLAT.	1.53		1.19	4.61	10.58	8.95	1.10	3.64	1.04	.21	1.22		34.07
PACIFIC COD	2.97	2.12	12.96	106.83	309.75	132.86	52.85	53.15	23.21	39.36	10.19	.60	746.85
LINGCOD	.29	.04		6.28	27.75	131.43	152.82	113.28	27.34	26.42	6.36	.20	492.21
SABLEFISH	.67				12.34	54.53	20.08	85.20	6.24	5.34	.09	.61	185.10
POLLOCK	.18												.18
HAKE						686.33	609.48	783.60	585.05	1198.95	307.00		4170.41
OCEAN PERCH	32.74	5.28	3.03	16.53	41.20	100.47	19.99	89.18		10.76	9.18	11.97	340.33
OTHER ROCKF.	87.98	68.25	31.54	2.66	144.41	280.51	246.19	179.58	57.26	95.63	24.86	19.82	1238.69
MISC. SP.	.22		.12	2.50	2.29	2.28	1.31	1.46	.40	.91	.04		11.53
DOGFISH	128.07	310.30	47.03	261.83	152.40	24.10	.28			45.49			969.50
ANIMAL FOOD													
REDUCTION		.79	.02	1.80		4.42							7.03
TOTAL	260.55	386.97	96.81	413.60	734.39	1494.79	1172.81	1363.13	721.95	1466.65	361.83	34.07	8507.55

TABLE 10. 1987 BRITISH COLUMBIA TRAWL LANDINGS (MT) OF GROUNDFISH - INTERNATIONAL AREA 3D NORTHWEST COAST VANCOUVER ISLAND.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.02	.09	.03	.17	1.12	.06	.74	.01	.32	.16	.07	.05	2.84
ROCK S.					.03	.09		.40	.55				1.07
PETRALE S.	6.70	1.44	3.62	2.18	1.87	3.38	12.69	.56	.33	2.22	1.76	.63	37.38
DOVER S.				.48	1.97	2.21	4.12	.53	.42	1.87	1.04	.01	12.65
REX SOLE													
STARRY FLDR								.29					.29
TURBOT	.15				.07	.74	2.67		1.73	3.54	.32		9.22
OTHER FLAT.	.67	.05	.01	.14	.15	.64			.02	.57	1.48	.26	3.99
PACIFIC COD	.18	4.07	1.74	.90	1.34	.58	1.67	2.91	9.46	30.32	7.61	1.74	62.52
LINGCOD	.28			4.17	3.97	2.00	6.85	30.67	6.66	19.38	12.94	1.02	87.94
SABLEFISH	.87	.99	.55	3.87	1.33	1.40	.96	2.82	10.75	23.84	9.81	.94	58.13
POLLOCK		.49											.49
HAKE													
OCEAN PERCH	46.21	22.19	40.78	86.52	48.07	47.40	17.37	6.21	89.48	188.46	50.89	8.85	652.43
OTHER ROCKF.	281.61	349.90	583.31	1053.30	492.17	149.96	217.98	254.22	519.81	835.13	876.24	99.68	5713.31
MISC. SP.		.05	.01		.24			.01		.01	.03		.35
DOGFISH	.49		22.88			1.11		1.87		2.65			29.00
ANIMAL FOOD										1.70	.84	.09	2.63
REDUCTION											2.76		2.76
TOTAL	337.18	379.27	652.93	1151.73	552.33	209.57	265.05	300.50	639.53	1109.85	965.79	113.27	6677.00

TABLE 11. 1987 BRITISH COLUMBIA TRAWL LANDINGS (MT) OF GROUNDFISH - INTERNATIONAL AREA 5A SOUTH QUEEN CHARLOTTE SOUND.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.29		1.00	1.67	4.20	5.32	4.13	3.40	1.63	4.54	.43	.23	26.84
ROCK S.			2.97		3.47	39.58	12.53	5.72	3.98	11.61	.26	.09	80.21
PETRALE S.	.51	.32		.72	4.16	14.27	25.23	18.79	19.96	9.05	1.97	1.30	96.28
DOVER S.		.05			.43	12.74	5.48	3.88	5.11	4.24	1.16	3.12	36.21
REX SOLE							.03	.05			.20		.28
STARRY FLDR			.79	4.97				.30		.39			6.45
TURBOT	1.15			1.30	5.80	160.02	118.14	9.40	9.88	10.58		.28	316.55
OTHER FLAT.		.44	6.26	2.09		2.44	1.76	.33	.14	3.57	.08	2.11	19.22
PACIFIC COD	1.81	.62	67.99	30.07	274.71	449.62	382.19	81.08	130.08	127.16	42.59	19.13	1607.05
LINGCOD	2.34	1.04	5.43	11.98	50.32	169.33	178.83	115.97	85.12	41.80	10.79	2.43	675.38
SABLEFISH		.10			.01	.59	3.36	.79	3.17	1.03	.43	.22	9.70
POLLOCK						22.84	3.74			2.10		.22	28.90
HAKE													
OCEAN PERCH		3.42	2.01	29.29	56.09	84.34	213.38	1.84	19.12	88.85	42.44	6.16	546.94
OTHER ROCKF.	167.22	385.78	431.48	353.71	286.96	223.27	419.65	126.03	139.69	271.59	137.71	39.95	2983.04
MISC. SP.	.02	.18	.63	1.31	.32	.99	.83	.90	.59	4.03	.10	.20	10.10
DOGFISH		3.03		2.31	20.99	10.03				12.80	16.13	.61	65.90
ANIMAL FOOD		.40	4.89										5.29
REDUCTION	6.08			.56	4.54	10.49	6.43				2.57		30.67
TOTAL	179.42	395.38	523.45	439.98	712.00	1205.87	1375.71	368.48	418.47	593.34	256.86	76.05	6545.01

TABLE 12. 1987 BRITISH COLUMBIA TRAWL LANDINGS (MT) OF GROUNDFISH - INTERNATIONAL AREA 5B NORTH QUEEN CHARLOTTE SOUND.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.				4.13	3.18	4.89	3.30	1.61	3.80	.55	.93		22.39
ROCK S.				.39	3.85	47.63	51.22	22.07	50.83	17.46	11.98		205.43
PETRALE S.	.65		.11	7.14	4.00	12.57	11.18	2.51	16.62	4.82	8.30		67.90
DOVER S.	3.00	.72	.01	2.08	3.04	8.50	5.49	5.15	4.84	3.28	1.39	4.50	42.00
REX SOLE	.09	.09	.04	.48	.18					.05			.93
STARRY FLDR													
TURBOT	11.71		.19	.98	1.72	22.34	19.71	15.96	26.50	14.55			113.66
OTHER FLAT.				.24	1.06	3.51	1.30	.25	2.14				8.50
PACIFIC COD	.01		.03	227.42	257.02	409.50	204.90	164.53	223.31	53.62	88.61	.24	1629.19
LINGCOD	.22		.02	17.88	138.50	235.35	139.06	58.16	120.83	38.05	7.70		755.77
SABLEFISH	.32	.18	.19	.67	1.09	3.92	5.63	4.98	14.60	3.72	.97		36.27
POLLOCK				.08	1.96	.41		2.54	.25				5.24
HAKE													
OCEAN PERCH	218.66	141.31	109.57	477.69	396.80	278.01	332.03	187.10	102.46	195.41	148.02	8.33	2595.39
OTHER ROCKF.	90.78	55.63	98.51	363.51	537.83	692.37	526.08	211.80	297.97	103.75	71.18	4.57	3053.98
MISC. SP.				3.35	9.76	27.94	18.76	3.94	8.17	6.21	1.63		79.76
DOGFISH					1.60								1.60
ANIMAL FOOD	.63		1.94	9.78	5.23						1.47		19.05
REDUCTION				18.80	.14	11.50		17.94		9.68			58.06
TOTAL	326.07	197.93	210.61	1134.62	1366.96	1758.44	1318.66	698.54	872.32	451.15	342.18	17.64	8695.12

TABLE 13. 1987 BRITISH COLUMBIA TRAWL LANDINGS (MT) OF GROUNDFISH - INTERNATIONAL AREA 5C SOUTH HECATE STRAIT.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	2.09	2.22	12.34	2.88	8.51	7.54	3.76	5.35	4.06	39.90	8.76	4.55	101.96
ROCK S.	.38	.03	.90	12.14	49.31	18.40	14.64	5.81	9.84	56.95	36.49	4.17	209.06
PETRALE S.	2.33	.47	2.01	.67	.64	1.70	3.55	.94	1.61	21.86	14.05	3.48	53.31
DOVER S.	.02	.01				.40	2.44		1.44	19.30	4.16		27.77
REX SOLE	1.28	.08	.68	.01	.04		.40		.21	.24	.11	1.54	4.59
STARRY FLDR									.20	1.13	7.79		9.12
TURBOT	.93	.03	.01	.22		.27	35.74	.29	.28	21.86	3.36		62.99
OTHER FLAT.													
PACIFIC COD	46.50	107.29	165.62	396.39	488.70	280.50	94.39	41.35	119.47	522.63	238.89	31.42	2533.15
LINGCOD	1.22	1.51	2.55	2.91	17.51	32.29	34.94	28.00	10.41	41.12	6.26	1.29	180.01
SABLEFISH	.02					.24	.21	.04	.14	6.29	.36		7.30
POLLOCK										.30			.30
HAKE													
OCEAN PERCH	13.88	.01	7.70	1.98	20.23	20.20	106.70	24.71	28.72	145.66	31.62	8.88	410.29
OTHER ROCKF.	11.95	.55	188.48	18.91	43.64	116.41	89.64	27.18	82.04	295.73	85.40	22.70	982.63
MISC. SP.	.16	.34	.84	.15	4.89	5.45	3.61	6.48	2.71	4.56	3.42	.89	33.50
DOGFISH			.91										.91
ANIMAL FOOD	.07	.27	.02				.04	1.26					1.66
REDUCTION							4.46			4.48			8.94
TOTAL	80.83	112.81	382.06	436.26	633.47	483.40	394.52	141.41	261.13	1182.01	440.67	78.92	4627.49

TABLE 14. 1987 BRITISH COLUMBIA TRAWL LANDINGS (MT) OF GROUNDFISH - INTERNATIONAL AREA 5D NORTH HECATE STRAIT.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	20.71	26.37	34.12	76.07	89.48	61.87	62.43	32.29	25.54	32.99	49.19	9.04	520.10
ROCK S.	.47	22.14	12.10	33.89	49.23	20.05	26.75	15.11	71.60	42.81	29.44	.05	323.64
PETRALE S.	3.58	2.57	1.07	2.55	3.29	1.81	1.61	4.00	.87	11.55	14.33	.67	47.90
DOVER S.				.21	.85	8.81	68.33	94.30	52.48	52.95	49.26		327.19
REX SOLE	2.37	.91	.23	1.82	3.20	4.27	13.96	10.29	18.29	3.53	14.35		73.22
STARRY FLDR		.56	.41	2.06	8.74	1.13	.27	1.47	12.41	5.34	6.52		38.91
TURBOT	.31	.61	.33	18.74	15.60	83.28	288.10	65.42	41.89	79.47	47.10		640.85
OTHER FLAT.		2.09	4.98	.74							.13		7.94
PACIFIC COD	403.37	553.43	814.72	702.25	632.65	987.28	462.40	420.69	499.58	457.27	337.21	27.29	6298.14
LINGCOD	3.66	3.73	10.42	15.74	29.05	26.02	15.27	21.54	19.80	13.83	14.67	12.70	186.43
SABLEFISH	.02				.08	1.20	5.00	1.74	2.85	11.44	5.99		28.32
POLLOCK	1.18	.04		.59	.10	.21	.54	.98					3.64
HAKE													
OCEAN PERCH				.01		3.73			.06	.07	.13		4.00
OTHER ROCKF.	2.64	1.80	8.47	13.60	3.39	7.74	4.63	3.29	7.60	22.19	13.96	9.53	98.84
MISC. SP.	5.49	8.40	7.71	25.42	29.31	12.48	11.02	16.01	20.14	13.29	11.60	1.36	162.23
DOGFISH				2.30		.19							2.49
ANIMAL FOOD	.07	1.26	.68	4.79	14.99	6.57	55.17	8.08	9.20	3.15	3.81		107.77
REDUCTION		16.21				26.82						7.60	50.63
TOTAL	443.87	640.12	895.24	900.78	879.96	1253.46	1015.48	695.21	782.31	749.88	597.69	68.24	8922.24

TABLE 15. 1987 BRITISH COLUMBIA TRAWL LANDINGS (MT) OF GROUNDFISH - INTERNATIONAL AREA 5E WEST COAST QUEEN CHARLOTTE ISLANDS.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.			.11			.01							.12
ROCK S.													
PETRALE S.	2.26	2.78	8.11	3.92	1.06	.41		.05	.14	.78			19.51
DOVER S.	21.20	10.39	27.40	41.40	39.41	4.75		.85		.33	1.87		147.60
REX SOLE	.02	.02	.35	1.55	1.21	.30							3.45
STARRY FLDR													
TURBOT	.27	3.84	5.53	.71	.33	.09							10.77
OTHER FLAT.													
PACIFIC COD		.27	1.19	.31	.37	1.02		.17		.29	.93		4.55
LINGCOD	.02	.56	1.11	.15	.71	.65		.18		.03	2.42		5.83
SABLEFISH	12.23	18.23	23.61	5.78	6.96	7.88	.20	1.23	.05	.26	2.05	.18	78.66
POLLOCK													
HAKE													
OCEAN PERCH	179.21	122.91	203.52	297.66	429.60	354.15	2.69	145.53	.74	44.96	3.67		1784.64
OTHER ROCKF.	222.81	598.57	537.61	192.55	285.35	110.22	70.12	164.99	33.30	94.62	100.85	19.00	2429.99
MISC. SP.		.02	.09	.03	.16	.05				.13			.50
DOGFISH													
ANIMAL FOOD	2.66	17.44	11.89	2.94	8.00	6.23							49.16
REDUCTION	2.18					6.64							8.82
TOTAL	442.86	775.03	820.52	547.00	773.18	492.40	73.01	313.00	34.23	141.40	111.79	19.18	4543.60

Tables of monthly catch (t) by minor area

TABLE 16. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 12.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE													
PETRALE S.													
DOVER SOLE													
REX SOLE													
FLATHEAD S.						1.07							1.07
SAND SOLE		2.66	5.28										7.94
TURBOT													
STAR.FLDR		3.16	1.14			.86							5.16
OTHER FLAT.			1.42										1.42
PACIFIC COD						.05							.05
LINGCOD										.08			.08
SABLEFISH													
POLLOCK													
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF													
OTHER RF						.02				.01			.03
HAKE													
OCTOPUS		.01											.01
PERCH		.02											.02
SKATE		.60	.58			.14							1.32
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD													
TOTAL		6.45	8.42			2.14				.09			17.10
CRAB													
DUMPED FISH													
DISCARDS		1.81											1.81

TABLE 17. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 13.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.												.07	.07
ROCK SOLE												.01	.01
PETRALE S.													
DOVER SOLE													
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR													
OTHER FLAT.								.04					.04
PACIFIC COD								1.87				39.77	41.64
LINGCOD													
SABLEFISH								.13				.03	.16
POLLOCK													
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF												.01	.01
WIDOW RF													
OTHER RF								.02				.12	.14
HAKE													
OCTOPUS								.01					.01
PERCH													
SKATE								.01					.01
SQUID													
STURGEON													
MISC. SP.													
DOGFISH								5.64					5.64
REDUCTION													
ANIMALFOOD													
TOTAL								7.72				40.01	47.73
CRAB													
DUMPED FISH													
DISCARDS								2.59					2.59

TABLE 18. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 14.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.					.15					.21			.36
ROCK SOLE	1.26	.31								.98	1.41		3.96
PETRALE S.										.06			.06
DOVER SOLE													
REX SOLE	.46												.46
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR				.59									.59
OTHER FLAT.	.75	1.46	.46	.19	.23	.56	.41	.17	.10	.42	.90	.10	5.75
PACIFIC COD	22.33	10.73	17.06	.15	14.25	29.11	18.71	13.31	.10	9.44	22.65	1.12	158.96
LINGCOD					.03	.11	.07	.01		.16	.04		.42
SABLEFISH					.02	.24	1.16	.52					1.94
POLLOCK													
OCEAN PERCH										.02			.02
BOCACCIO													
CANARY RF													
REDSTR. RF									.04				.04
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF										.54			.54
OTHER RF				.01	.09	.12	.18	.01	.26	.66	.03	.21	1.57
HAKE		.05		12.83	597.02	75.24					107.41		792.55
OCTOPUS	.01	.02					.02				.06		.11
PERCH	.04			.01					.04				.09
SKATE	.05	.10	.29	.02	.05	.15	.15	.10	.01	.30	.20		1.42
SQUID													
STURGEON													
MISC. SP.													
DOGFISH				1.90		3.22	18.88	16.55	7.67	5.92	2.17	3.22	59.53
REDUCTION					.73								.73
ANIMALFOOD													
TOTAL	24.90	12.67	17.81	15.70	612.57	108.75	39.58	30.67	8.22	18.71	134.87	4.65	1029.10
CRAB													
DUMPED FISH													
DISCARDS	1.91	.27			5.01	22.95	29.94	4.99					65.07

TABLE 19. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 15.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE													
PETRALE S.													
DOVER SOLE													
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR							.12						.12
OTHER FLAT.							.09						.09
PACIFIC COD													
LINGCOD							.01						.01
SABLEFISH													
POLLOCK													
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF													
OTHER RF							.01						.01
HAKE													
OCTOPUS													
PERCH													
SKATE							.07						.07
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD													
TOTAL							.30						.30
CRAB													
DUMPED FISH													
DISCARDS		.09											.09

TABLE 20. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 16.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE													
PETRALE S.													
DOVER SOLE													
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR													
OTHER FLAT.									.32				.32
PACIFIC COD									2.20				2.20
LINGCOD													
SABLEFISH													
POLLOCK		155.23									70.00		225.23
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF		.11											.11
WIDOW RF													
OTHER RF													
HAKE		95.03									7.70		102.73
OCTOPUS													
PERCH													
SKATE									.04				.04
SQUID													
STURGEON													
MISC. SP.									.02				.02
DOGFISH													
REDUCTION													
ANIMALFOOD													
TOTAL		250.37							2.58		77.70		330.65
CRAB													
DUMPED FISH													
DISCARDS													

TABLE 21. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 17.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	3.43	3.00	.29	.61							.13	.13	7.59
ROCK SOLE					.66								.66
PETRALE S.										.16			.16
DOVER SOLE			.04										.04
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR		.66	1.29	.72									2.67
OTHER FLAT.	4.90	1.75	2.04	2.70	7.27	2.95	.36	4.32	2.33	4.38	2.45	1.59	37.04
PACIFIC COD	4.30	3.89	3.61	2.49	3.10	1.62	.34	3.67	2.27	3.82	3.49	1.50	34.10
LINGCOD				.32	1.05	.05	.03	.13		.16			1.74
SABLEFISH													
POLLOCK	.01	70.58	327.90	.05	.01	.01		.01					398.57
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF										1.18		1.32	2.50
WIDOW RF													
OTHER RF					.44	.13	.04	.15		.06	.07	.09	.98
HAKE	.01	103.69	102.26	292.21	923.72								1421.89
OCTOPUS		.02	.05		.02			.01					.10
PERCH		.01				.02							.03
SKATE	.03	.04	.16	.47	.43	.11	.14	.12				.01	1.51
SQUID													
STURGEON													
MISC. SP.				.03	.04	.05	.05	.06					.23
DOGFISH		13.61	.11										13.72
REDUCTION			21.83	1.64	1.36								24.83
ANIMALFOOD													
TOTAL	12.68	197.25	459.58	301.24	938.10	4.94	.96	8.47	4.60	9.76	6.14	4.66	1948.36
CRAB		.01		.02	.01	.01							.05
DUMPED FISH													
DISCARDS	2.88	16.59								9.53		1.02	30.02

TABLE 22. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 18.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.08		1.58	.37					.42	1.26	.85		4.56
ROCK SOLE	.18		.16			.07				.09			.50
PETRALE S.													
DOVER SOLE			.16	.31									.47
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT			.03										.03
STAR.FLDR		.04	.62	.05							.51		1.22
OTHER FLAT.	8.63	1.85	4.57	8.67	3.22	3.00			2.31	2.95	6.14	3.88	45.22
PACIFIC COD	18.30	24.05	49.79	15.16	13.84	.61			6.38	19.37	5.50	10.16	163.16
LINGCOD				.02	.32	.03			.21	.50	.02		1.10
SABLEFISH		.01	.01		.05								.07
POLLOCK	2.22	.31	22.77	.01									25.31
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF													
OTHER RF	.02	.03	.54	.39	.09	.25			.04	.14	.30	.06	1.86
HAKE	.08	.15	.08										.31
OCTOPUS	.02	.05	.12	.08	.01				.03	.10	.11	.04	.56
PERCH	.08	.09		.07									.24
SKATE	.09	.46	1.24	.93	.17	.24			.30	.39	.30	.14	4.26
SQUID													
STURGEON													
MISC. SP.			.07	.39									.46
DOGFISH	1.71		.01		.92			7.67	18.34	23.18	1.99	3.04	56.86
REDUCTION													
ANIMALFOOD										.06			.06
TOTAL	31.41	27.04	81.75	26.45	18.62	4.20		7.67	28.03	48.04	15.72	17.32	306.25
CRAB					.01	.04			.02	.01			.08
DUMPED FISH													
DISCARDS	4.27					.91							5.18

TABLE 23. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 19.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.01				.09	.13	.05	.37	.16	1.76	.16	.02	2.75
ROCK SOLE										.35			.35
PETRALE S.								.01	.01	.22			.24
DOVER SOLE											.30	.02	.32
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT							.12	.15	.05	.10	.02		.44
STAR.FLDR													
OTHER FLAT.	.03	.42	.33		2.43		.04	.09	.48	4.66	1.42	.33	10.23
PACIFIC COD	9.06	13.15	3.60		20.43	5.86	2.62	29.45	48.99	35.34	178.17	184.51	531.18
LINGCOD					.10	.30	.48	2.99	3.25	1.58	.50	.04	9.24
SABLEFISH											.02		.02
POLLOCK	.55											1.16	1.71
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF										.14			.14
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF										.01	.01		.02
WIDOW RF													
OTHER RF	.02				.09			.03	.05	1.30	.44	.27	2.20
HAKE										.28			.28
OCTOPUS					.02	.01		.08	.11	.08	.08	.04	.42
PERCH									.04	.03			.07
SKATE	.22	.39	.20		.90	.03	.05	.23	.49	.48	.38	.26	3.63
SQUID													
STURGEON													
MISC. SP.	.01										.06		.07
DOGFISH	4.51	.35	.25						2.01	18.95	1.18	43.49	70.74
REDUCTION									.01		.01		.02
ANIMALFOOD													
TOTAL	14.41	14.31	4.38		24.06	6.33	3.36	33.40	55.65	65.28	182.75	230.14	634.07
CRAB													
DUMPED FISH									.04				.04
DISCARDS	.09					21.32	.14	10.44				2.18	34.17

TABLE 24. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 20.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.02			.89					.64	.36			1.91
ROCK SOLE													
PETRALE S.		.09	.02				.03	.10					.24
DOVER SOLE		.53		.44		1.03	8.51	3.05	.16				13.72
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT		.01				.18	.30	.03	.08	.13			.73
STAR.FLDR													
OTHER FLAT.	.77	2.72	1.37	2.38	1.31	3.07	7.29	6.83	9.34	7.59			42.67
PACIFIC COD	3.85	24.77	14.11	7.51	5.43	2.50	9.43	8.03	2.71	4.48			82.82
LINGCOD					.19	.68	1.10	1.53	.60	.34			4.44
SABLEFISH					.02	.03	1.12	.09	.05				1.31
POLLOCK													
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF				.64	.40	.46	.41	1.43	.48	.32			4.14
WIDOW RF													
OTHER RF		.07	.18		.02		.11	.02	.01	.03			.44
HAKE						78.51	274.89	80.98	124.68	376.23			935.29
OCTOPUS		.03		.04		.05	.05	.01	.02	.02			.22
PERCH													
SKATE	.01	.24	.43		.13	.07	.47	.16	.09	.03			1.63
SQUID													
STURGEON				.02									.02
MISC. SP.						.02		.01	.02	.01			.06
DOGFISH	.03		7.95	.24									8.22
REDUCTION													
ANIMALFOOD													
TOTAL	4.68	28.46	24.06	12.16	7.50	86.60	303.71	102.27	138.88	389.54			1097.86
CRAB													
DUMPED FISH													
DISCARDS	.64					1.70	6.12	6.80		.91			16.17

TABLE 25. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 29.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE													
PETRALE S.													
DOVER SOLE													
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR													
OTHER FLAT.		.14	.03										.17
PACIFIC COD			.54										.54
LINGCOD													
SABLEFISH													
POLLOCK			534.83	45.16									579.99
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF													
OTHER RF													
HAKE		85.85	1909.68	3269.43	522.79	39.77				24.22			5851.74
OCTOPUS													
PERCH													
SKATE													
SQUID													
STURGEON													
MISC. SP.													
DOGFISH			65.98	72.67									138.65
REDUCTION			6.98	10.99									17.97
ANIMALFOOD													
TOTAL		85.99	2518.04	3398.25	522.79	39.77				24.22			6589.06
CRAB													
DUMPED FISH													
DISCARDS													

TABLE 26. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 21.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.01	.02			6.86	.12	.10			.14		.02	7.27
ROCK SOLE	.06				1.51			.27					1.84
PETRALE S.		.03		.02	5.52	1.35	.17	.20				.09	7.38
DOVER SOLE				.22	.75	.69	.23	3.38				.01	5.28
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT					.53	6.11		3.54					10.18
STAR.FLDR			.01										.01
OTHER FLAT.	1.36		.26		2.44	3.89	.41	.55					8.91
PACIFIC COD	1.71		5.34		148.56	5.24	.61	3.21				.03	164.70
LINGCOD					4.48	13.69	2.23	1.99				.19	22.58
SABLEFISH					11.50	37.74	.45	25.33	.29			.15	75.46
POLLOCK	.18												.18
OCEAN PERCH	5.56	4.33	2.87		7.55	70.71	7.89	.11				3.06	102.08
BOCACCIO					9.15	2.24							11.39
CANARY RF					5.71	29.46	8.62					.08	43.87
REDSTR. RF		1.41			51.24	68.25	.72	7.21	1.45				130.28
ROUGHEYE RF													
SIL'GRAY RF			2.48		10.73	1.11	.92	.55					15.79
YEL'MOUTH R					.56	1.10	1.23						2.89
YEL'TAIL RF		.18		.12		16.25	9.57	79.53	27.48	.96			134.09
WIDOW RF					1.59	2.32							3.91
OTHER RF	.04		.11		4.80	18.60	.13	.41				.25	24.34
HAKE						245.64	332.23	683.31	550.30	756.20	307.00		2874.68
OCTOPUS	.01		.02		.10								.13
PERCH													
SKATE	.20		.05	.08	.38	.12	.02	.02					.87
SQUID													
STURGEON					.03								.03
MISC. SP.					.12								.12
DOGFISH	.13				1.14								1.27
REDUCTION													
ANIMALFOOD													
TOTAL	9.26	5.97	11.14	.44	275.25	524.63	365.53	809.61	579.52	757.30	307.00	3.88	3649.53
CRAB													
DUMPED FISH													
DISCARDS					11.68	7.50		31.75	9.98				60.91

TABLE 27. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 23.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.		.14	.63	3.89	8.32	9.87	5.66	9.77	5.23	6.89	.18	.01	50.59
ROCK SOLE	.01		.05	4.16	3.88	14.28	3.08	3.38	2.75	26.13	.38		58.10
PETRALE S.				.40	4.33	15.49	30.09	28.34	12.31	7.65	.58	.74	99.93
DOVER SOLE				1.56	.15	3.59	2.65	2.98	.98	2.28	.02		14.21
REX SOLE													
FLATHEAD S.													
SAND SOLE			.01				.01						.02
TURBOT			.01		1.39	2.78	20.02	1.21	.14	.32			25.87
STAR.FLDR			.13	.05		.38							.56
OTHER FLAT.	.01		.48	4.61	7.92	4.97	.57	2.19	1.04				21.79
PACIFIC COD	1.17	2.12	7.42	106.50	161.14	126.63	50.17	49.73	23.15	38.33	2.72	.57	569.65
LINGCOD		.04		5.96	22.77	116.82	132.58	110.41	27.22	21.40	1.25	.02	438.47
SABLEFISH	.36				.27	15.73	19.17	54.01	5.94	3.93		.46	99.87
POLLOCK													
OCEAN PERCH	15.43	.61			19.67	5.63	.05	45.01		3.24		8.91	98.55
BOCACCIO			1.68		1.07	1.58	.54	.02					4.89
CANARY RF			1.68		1.96	44.93	2.28	22.71	7.94	6.44	.13	.55	88.62
REDSTR. RF		6.86	3.63		5.66	16.19	10.52	4.96	.46			8.61	56.89
ROUGHEYE RF													
SIL'GRAY RF			2.83	1.19	43.13	14.83	1.22	.20	1.07				64.47
YEL'MOUTH R							1.58						1.58
YEL'TAIL RF	4.69	17.79	5.42		1.48	27.15	77.63	20.04	17.17	29.59			200.96
WIDOW RF							1.60	.10					1.70
OTHER RF			.01	.42	5.03	2.16	3.05	.49	.53	2.64	.15	2.06	16.54
HAKE						440.70	277.25	100.29	34.75	442.76			1295.75
OCTOPUS			.01	.02	.01	.01							.05
PERCH													
SKATE	.01		.05	2.34	1.56	1.97	.52	1.35	.40	.47	.04		8.71
SQUID													
STURGEON						.09							.09
MISC. SP.					.01		.18						.19
DOGFISH	127.94	310.30	18.43	252.06	144.66	24.10	.28			45.49			923.26
REDUCTION		.79		1.80		4.42							7.01
ANIMALFOOD													
TOTAL	149.62	338.65	42.47	384.96	434.42	894.31	640.70	457.19	141.08	637.56	5.45	21.93	4148.34
CRAB													
DUMPED FISH													
DISCARDS	.64					169.33	261.73	347.46	42.18		.36		821.70

TABLE 28. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 24.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.			.01	.01	.04	1.39	3.57				.10		5.12
ROCK SOLE				.11		.65	1.17	.15					2.08
PETRALE S.	5.82		.09	.04	.07	6.47	1.64	.26		.07	.76		15.22
DOVER SOLE				.10	.33	4.58	.25				.58		5.84
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT						1.13		.59		.09			1.81
STAR.FLDR							.06				.31		.37
OTHER FLAT.	.15		.44		.22	.09	.11	.89		.21	1.23		3.34
PACIFIC COD	.10		.20	.33	.05	.99	2.07	.21	.05	1.03	7.47		12.50
LINGCOD	.29			.32	.50	.92	18.00	.88	.12	5.01	5.12		31.16
SABLEFISH	.31				.56	1.06	.46	5.87		1.41	.09		9.76
POLLOCK													
OCEAN PERCH	11.75	.35	.16	16.53	13.97	24.13	12.05	44.06		7.52	9.18		139.70
BOCACCIO			1.63			.06	1.95	.54	.39	9.88	2.45		16.90
CANARY RF	2.78		3.60			1.19	39.90	13.73	.77	16.67	3.49	8.26	90.39
REDSTR. RF	3.52	2.95	1.24			8.93	5.70	1.09		16.43	4.39		44.25
ROUGHEYE RF											.85		.85
SIL'GRAY RF	.60		3.83			12.61	34.38	18.46		2.23	3.83		75.94
YEL'MOUTH R						.12	2.53						2.65
YEL'TAIL RF	72.65	39.04	.45	.79		11.24	27.53	4.18		4.02	5.72		165.65
WIDOW RF	2.57						2.27						4.84
OTHER RF	1.12		2.96	.13	2.29	.20	12.33	5.35		6.76	3.85		34.99
HAKE													
OCTOPUS					.01		.03						.04
PERCH													
SKATE				.05	.03	.08	.50	.04		.44			1.14
SQUID													
STURGEON						.01	.02						.03
MISC. SP.					.04		.04	.04					.12
DOGFISH			28.61	9.76	6.60								44.97
REDUCTION			.02										.02
ANIMALFOOD													
TOTAL	101.67	42.35	43.24	28.17	24.71	75.85	166.57	96.34	1.33	71.77	49.42	8.26	709.68
CRAB								.02					.02
DUMPED FISH													
DISCARDS	5.67					1.38	11.79		9.53	7.48	.45		36.31

TABLE 29. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 25.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.01	.09	.03		.09		.74		.12		.05	.05	1.18
ROCK SOLE													
PETRALE S.	.39	.62	.10	.87	1.12	2.59	12.69	.25	.11		.36	.63	19.73
DOVER SOLE				.48	.70	.97	3.32	.06	.30	.27	.37	.01	6.48
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT					.07	.74	2.68		.63	.04	.06		4.22
STAR.FLDR								.07					.07
OTHER FLAT.		.05			.04	.64				.57	1.05	.26	2.61
PACIFIC COD	.02	4.08	.23	.21	.12	.04	1.07	.39	.95	.94	4.66	1.74	14.45
LINGCOD	.01			.41	1.16	.54	3.67	7.85	.48	2.34	6.26	1.02	23.74
SABLEFISH		.03		3.43	.86	1.11	.11	2.11	6.05	2.01	3.09	.29	19.09
POLLOCK		.49											.49
OCEAN PERCH	3.56	1.16	.45	16.68	32.72	37.58	7.46	1.50	34.21	49.51	10.26	6.85	201.94
BOCACCIO	1.60	.78	6.48	.33	1.00	7.26	5.65	.43	14.29	12.95	14.26	3.46	68.49
CANARY RF	20.24	14.78	35.36	30.81	12.13	10.62	3.45	39.78	31.81	40.76	72.36	15.91	328.01
REDSTR. RF	2.60	7.40	14.63	23.28	5.86	5.14	18.14	2.50	6.39	4.17	42.93	12.66	145.70
ROUGHEYE RF						2.61							2.61
SIL'GRAY RF	6.13	7.93	15.24	2.11	32.23	18.01	38.25	30.03	29.26	12.59	24.48	9.96	226.22
YEL'MOUTH R						.09					.03	3.82	3.94
YEL'TAIL RF	60.51	176.97	239.75	105.20	80.18	24.22	38.37	68.56	141.37	271.52	487.47	33.00	1727.12
WIDOW RF	9.27	8.48	50.80	9.83	43.64	18.05	24.39	12.74	95.59	197.91	95.63	19.92	586.25
OTHER RF	2.66	48.55	5.19	2.30	13.97	6.37	1.24	.86	4.41	.65	2.89	.31	89.40
HAKE													
OCTOPUS													
PERCH													
SKATE		.04									.03		.07
SQUID													
STURGEON													
MISC. SP.													
DOGFISH								1.87					1.87
REDUCTION											2.76		2.76
ANIMALFOOD										.02	.83	.09	.96
TOTAL	107.00	271.45	368.26	195.94	225.89	136.58	161.23	169.00	365.97	596.25	769.83	109.98	3477.40
CRAB													
DUMPED FISH													
DISCARDS	3.18					11.34	3.63	1.13	37.65	34.70	13.22		104.85

TABLE 30. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 26.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.01			.17		.06	.01	.01			.03		.29
ROCK SOLE								.33	.06				.39
PETRALE S.	3.47			1.03	.10	.36							4.96
DOVER SOLE						.14	.05						.19
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT									1.10				1.10
STAR.FLDR													
OTHER FLAT.				.14					.02				.16
PACIFIC COD	.16			.69		.20	.60	.33	.36	1.36	2.39		6.09
LINGCOD	.01			3.43		.34	1.40	7.96	2.36	.17	.05		15.72
SABLEFISH	.04					.29	.52		1.01	.35			2.21
POLLOCK													
OCEAN PERCH	13.40					6.19							19.59
BOCACCIO	1.68					1.69	6.84		19.22	1.89			31.31
CANARY RF	3.35			6.47	3.15	3.75	2.03		49.79	5.64			74.18
REDSTR. RF	2.93						16.27		22.46	3.57			45.23
ROUGHEYE RF	.17												.17
SIL'GRAY RF	2.09			14.60	.08	4.01	16.89		8.90	25.04			71.61
YEL'MOUTH R							.90						.90
YEL'TAIL RF	18.96	1.78				10.03	32.75		43.14	23.65	14.86		145.17
WIDOW RF	26.83	.20				9.18			3.84	7.30			47.35
OTHER RF	2.76						3.66			2.34			8.76
HAKE													
OCTOPUS								.01					.01
PERCH													
SKATE													
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD										1.67			1.67
TOTAL	75.86	1.98		26.53	3.33	36.24	81.91	8.64	152.26	72.98	17.33		477.06
CRAB													
DUMPED FISH									1.46				1.46
DISCARDS									.73		.14		.86

TABLE 31. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 27.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.					1.03				.20	.16			1.39
ROCK SOLE					.03	.09		.08	.49				.69
PETRALE S.	2.84	.82	3.53	.28	.64	.43		.31	.22	2.22	1.40		12.69
DOVER SOLE					1.27	1.09	.77	.47	.11	1.61	.66		5.98
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT	.15									3.50	.26		3.91
STAR.FLDR								.22					.22
OTHER FLAT.	.68		.01		.10						.43		1.22
PACIFIC COD			1.51		1.21	.34		2.18	8.15	28.02	.57		41.98
LINGCOD	.26			.32	2.81	1.12	1.78	14.86	3.82	16.87	6.63		48.47
SABLEFISH	.82	.97	.55	.45	.46		.33	.70	3.71	21.47	6.72	.65	36.83
POLLOCK													
OCEAN PERCH	29.25	21.03	40.32	69.84	15.35	3.64	9.91	4.71	55.27	138.95	40.63	2.00	430.90
BOCACCIO	1.03		5.54	11.06	12.10	.34		3.55	2.04	15.44	22.50		73.60
CANARY RF	1.61	.22	13.60	9.41	8.30	8.58	.27	40.88	1.55	25.49	.33		110.24
REDSTR. RF	16.46	8.91	86.91	281.26	61.07	5.88	5.50		3.86	102.97	76.75		649.57
ROUGHEYE RF	.05		1.44						.36	.04	.02		1.91
SIL'GRAY RF	9.89	5.35	12.36	36.91	5.93	12.63	.71	22.21	19.09	20.97	3.56	.01	149.62
YEL'MOUTH R	32.75	10.22	46.71	373.04	177.87	1.22	.83	5.60	11.86	25.81	11.50	.43	697.84
YEL'TAIL RF	33.07	38.16	4.23	6.36		.15	.61	1.75	.02	25.23	.40		109.97
WIDOW RF	20.95	11.72	19.83	32.75	.97						.11	.10	86.43
OTHER RF	4.00	8.44	25.22	107.58	33.70	.12	1.26	25.35	10.54	9.21	6.16	.11	231.69
HAKE													
OCTOPUS													
PERCH										.01			.01
SKATE			.01		.24								.25
SQUID													
STURGEON													
MISC. SP.													
DOGFISH	.49		22.88			1.11				2.65			27.13
REDUCTION													
ANIMALFOOD													
TOTAL	154.30	105.84	284.65	929.26	323.08	36.74	21.97	122.87	121.29	440.61	178.63	3.30	2722.54
CRAB													
DUMPED FISH													
DISCARDS							.91	1.81	2.27	18.37	50.89		74.25

TABLE 32. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 11.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.29		1.00	1.67	4.20	5.33	4.13	3.40	1.63	4.54	.43	.23	26.85
ROCK SOLE			2.97		3.47	39.58	12.53	5.72	3.98	11.62	.26	.09	80.22
PETRALE S.	.51	.32		.72	4.16	14.27	25.23	18.79	19.96	9.05	1.97	1.30	96.28
DOVER SOLE		.05			.43	12.75	5.48	3.88	5.11	4.24	1.16	3.12	36.22
REX SOLE							.03	.05			.20		.28
FLATHEAD S.													
SAND SOLE													
TURBOT	1.15			1.30	5.80	160.02	118.14	9.40	9.88	10.58		.28	316.55
STAR.FLDR			.79	4.97				.30		.39			6.45
OTHER FLAT.		.44	6.27	2.09		2.44	1.76	.33	.14	3.57	.08	2.11	19.23
PACIFIC COD	1.81	.62	67.99	30.07	274.71	449.61	382.19	81.08	130.08	127.16	42.59	19.13	1607.04
LINGCOD	2.34	1.04	5.43	11.98	50.32	169.33	178.83	115.97	85.12	41.80	10.79	2.43	675.38
SABLEFISH		.10			.01	.59	3.35	.79	3.17	1.03	.43	.22	9.69
POLLOCK						22.84	3.74			2.10		.22	28.90
OCEAN PERCH		3.42	2.01	29.29	56.09	84.34	213.37	1.84	19.12	88.85	42.44	6.16	546.93
BOCACCIO	1.81	.54	5.85	11.17	26.25	15.74	8.99	2.23	13.89	47.08	24.99	7.24	165.78
CANARY RF	1.40	1.50	5.75	10.64	19.99	15.20	42.61	29.53	17.38	21.14	12.12	5.20	182.46
REDSTR. RF	23.51	50.04	191.53	149.95	34.09	5.72	54.81	2.35	3.11	58.82	7.37	9.56	590.86
ROUGHEYE RF					.70					.13			.83
SIL'GRAY RF	9.08	12.42	43.69	57.99	51.80	93.98	134.88	67.31	67.38	77.13	57.19	7.59	680.44
YEL'MOUTH R	52.14	204.05	78.53	43.23	4.10	1.11	25.23	.84	12.93	12.48	4.16		438.80
YEL'TAIL RF	66.10	52.10	55.45	32.38	121.40	69.75	117.72	18.11	22.16	35.72	29.24	9.42	629.55
WIDOW RF	11.79	28.72	28.25	6.73	7.76		1.15	1.29	2.60		.83		89.12
OTHER RF	1.40	36.42	22.44	41.62	20.86	21.77	34.28	4.36	.24	19.07	1.80	.94	205.20
HAKE													
OCTOPUS			.03			.07	.10	.04	.16	.12	.04	.03	.59
PERCH													
SKATE	.02		.60	.72	.31	.90	.72	.85	.44	3.91	.05	.07	8.59
SQUID													
STURGEON				.60		.02							.62
MISC. SP.		.18			.01					.01		.10	.30
DOGFISH		3.03		2.31	20.99	10.03				12.79	16.13	.61	65.89
REDUCTION	6.08			.56	4.54	10.49	6.43				2.57		30.67
ANIMALFOOD		.40	4.89										5.29
TOTAL	179.43	395.39	523.47	439.99	711.99	1205.88	1375.70	368.46	418.48	593.33	256.84	76.05	6545.01
CRAB													
DUMPED FISH													
DISCARDS	6.80	27.22			18.67	54.44	25.40	3.22	6.71	37.87	20.87		201.20

TABLE 33. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 8.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.				4.13	3.18	4.90	3.30	1.61	3.80	.55	.93		22.40
ROCK SOLE				.39	3.85	47.62	51.22	22.07	50.82	17.46	11.98		205.41
PETRALE S.	.65		.11	7.14	4.00	12.58	11.19	2.51	16.63	4.82	8.30		67.93
DOVER SOLE	3.00	.72	.01	2.08	3.04	8.50	5.49	5.16	4.84	3.28	1.39	4.50	42.01
REX SOLE	.09	.09	.04	.46	.18					.05			.91
FLATHEAD S.													
SAND SOLE													
TURBOT	11.71		.19	.98	1.72	22.34	19.71	15.96	26.50	14.55			113.66
STAR.FLDR													
OTHER FLAT.				.24	1.06	3.51	1.30	.25	2.14				8.50
PACIFIC COD	.01		.03	227.42	257.02	409.50	204.90	164.53	223.31	53.62	88.61	.24	1629.19
LINGCOD	.22		.02	17.88	138.50	235.35	139.07	58.16	120.83	38.05	7.70		755.78
SABLEFISH	.32	.18	.19	.67	1.09	3.92	5.63	4.98	14.59	3.72	.97		36.26
POLLOCK				.08	1.96	.41		2.54	.25				5.24
OCEAN PERCH	218.66	141.31	109.57	477.69	396.80	278.01	332.03	187.10	102.46	195.41	148.02	8.33	2595.39
BOCACCIO	3.44			17.05	56.91	52.60	52.95	19.70	24.09	15.71	3.93		246.38
CANARY RF	1.65	.46	.92	34.46	55.76	140.90	78.11	19.43	31.91	8.30	9.26	.63	381.79
REDSTR. RF	24.51	15.86	34.13	49.49	51.13	17.66	14.85	27.51	21.29	10.80	.69		267.92
ROUGHEYE RF					.36		1.12		1.76	.07	.65		3.96
SIL'GRAY RF	60.02	35.85	37.13	121.28	43.94	200.51	88.28	82.04	107.95	23.68	4.13	2.17	806.98
YEL'MOUTH R	.06		.94	16.13	13.69	1.89	7.13	5.80	10.18	15.74	10.02		81.58
YEL'TAIL RF			.89	89.39	237.56	269.18	173.85	46.13	53.70	18.45	26.94	1.72	917.81
WIDOW RF		.85	10.63	12.39	35.13	1.91	47.63	7.72	7.10	2.48			125.84
OTHER RF	1.10	2.61	13.90	23.31	43.36	7.72	62.15	3.48	39.99	8.51	15.54	.05	221.72
HAKE													
OCTOPUS													
PERCH				.08	.04	.02	.09	.03	.19	.20	.23		.88
SKATE				3.26	9.72	27.92	18.64	3.91	7.97	6.02	1.40		78.84
SQUID							.03						.03
STURGEON													
MISC. SP.													
DOGFISH					1.60								1.60
REDUCTION				18.79	.14	11.50		17.94		9.68			58.05
ANIMALFOOD	.63		1.94	9.78	5.24						1.47		19.06
TOTAL	326.07	197.93	210.64	1134.57	1366.98	1758.45	1318.67	698.56	872.30	451.15	342.16	17.64	8695.12
CRAB													
DUMPED FISH													
DISCARDS		1.36		.18	71.17	108.34	25.90	15.74	20.87	37.97	12.07	31.75	325.34

TABLE 34. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 2BE.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	.59	2.22	5.47	2.88	8.51	7.54	3.76	1.30	4.06	29.68	3.94	2.06	72.01
ROCK SOLE	.38	.03	.90	12.14	49.31	18.40	14.64	1.76	9.84	15.59	13.36	.43	136.78
PETRALE S.	.75	.47	1.48	.67	.64	1.70	3.55		.99	18.25	4.19		32.69
DOVER SOLE	.02	.01				.24	2.44		1.44	14.50	.34		18.99
REX SOLE		.08	.62	.01	.04		.40		.21	.22	.10	1.54	3.22
FLATHEAD S.													
SAND SOLE													
TURBOT	.93	.03	.01	.22		.27	35.73	.29	.28	15.50	.33		53.59
STAR.FLDR									.20	1.13	7.80		9.13
OTHER FLAT.													
PACIFIC COD	32.61	105.89	104.70	382.97	488.70	280.50	94.39	17.33	119.00	406.63	170.82	19.53	2223.07
LINGCOD	1.06	1.51	2.37	2.02	17.33	32.29	34.94	12.97	9.68	17.64	3.59	.67	136.07
SABLEFISH	.02					.24	.21	.04	.14	.14	.26		1.05
POLLOCK										.30			.30
OCEAN PERCH	13.88	.01	7.70		20.23	20.16	105.49	24.71	28.72	98.52	31.62	8.88	359.92
BOCACCIO	.68		3.56		.29	12.51	3.38	1.11	4.31	6.74	5.33		37.91
CANARY RF	.14		3.12		4.91	2.46	.23		.30	29.46	9.55		50.17
REDSTR. RF	1.79		40.26	3.86	3.11	1.99	16.00	10.10	5.47	1.56	.17		84.31
ROUGHEYE RF			.55						1.47				2.02
SIL'GRAY RF	8.24		137.53	7.98	12.21	78.28	34.53	11.63	40.91	44.99	41.93	13.52	431.75
YEL'MOUTH R	.03		.18	4.78			12.73		14.00	30.83			62.55
YEL'TAIL RF	.09	.48	.04		5.45	.40	.42		.34	7.15	5.79	9.04	29.20
WIDOW RF			.18		.32				.04		1.90		2.44
OTHER RF	.99	.07	3.07	2.21	10.23	15.52	22.03	4.33	1.63	28.18	4.36		92.62
HAKE													
OCTOPUS	.04	.09	.11	.12	.14	.01			.18	.56	.32	.47	2.04
PERCH													
SKATE	.12	.26	.64	.04	4.75	5.43	3.61	6.47	2.54	3.08	2.07	.35	29.36
SQUID													
STURGEON													
MISC. SP.													
DOGFISH			.91										.91
REDUCTION							4.46						4.46
ANIMALFOOD	.07	.27	.02				.04	1.26					1.66
TOTAL	62.43	111.42	313.42	419.90	626.17	477.94	392.98	93.30	245.75	770.65	307.77	56.49	3878.22
CRAB													
DUMPED FISH													
DISCARDS		.45	2.27	4.58	2.13	38.75	14.97	11.29		7.48	1.41		83.33

TABLE 35. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 5L.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	1.50		6.87					4.05		8.91	4.82	2.49	28.64
ROCK SOLE								4.05		40.27	23.14	3.74	71.20
PETRALE S.	1.58		.52					.94	.62	2.47	9.86	3.48	19.47
DOVER SOLE										2.82	3.82		6.64
REX SOLE	1.27		.06							.02	.01		1.36
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR										6.35	3.03		9.38
OTHER FLAT.													
PACIFIC COD	13.89	1.40	60.92	13.42				24.02		97.11	68.06	11.90	290.72
LINGCOD	.17		.19	.89				15.03	.72	16.46	2.67	.62	36.75
SABLEFISH										6.14	.09		6.23
POLLOCK													
OCEAN PERCH				1.98			1.21			23.34			26.53
BOCACCIO				.04						17.66	.11	.08	17.89
CANARY RF							.11		7.37	27.99			35.47
REDSTR. RF										3.83			3.83
ROUGHEYE RF													
SIL'GRAY RF				.04			.11		.84	25.32	4.67	.04	31.02
YEL'MOUTH R										4.80			4.80
YEL'TAIL RF							.11			28.38		.03	28.52
WIDOW RF										15.94			15.94
OTHER RF			.01							9.41	.70		10.12
HAKE													
OCTOPUS			.01							.20	.67	.06	.94
PERCH													
SKATE			.08								.38		.46
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD										4.48			4.48
TOTAL	18.41	1.40	68.66	16.37			1.54	48.09	9.55	341.90	122.03	22.44	650.39
CRAB													
DUMPED FISH													
DISCARDS	.45		2.27							11.34	.23		14.29

TABLE 36. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 6.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.										1.31			1.31
ROCK SOLE										1.09			1.09
PETRALE S.										1.14			1.14
DOVER SOLE						.16				1.98			2.14
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR													
OTHER FLAT.													
PACIFIC COD									.47	18.89			19.36
LINGCOD					.18					7.01			7.19
SABLEFISH										.01			.01
POLLOCK													
OCEAN PERCH						.04				23.81			23.85
BOCACCIO					.92					.73	.32		1.97
CANARY RF										1.42	3.75		5.17
REDSTR. RF					3.09	5.24							8.33
ROUGHEYE RF													
SIL'GRAY RF									5.36	10.13	4.32		19.81
YEL'MOUTH R													
YEL'TAIL RF					2.58					.96	2.50		6.04
WIDOW RF					.52								.52
OTHER RF										.24			.24
HAKE													
OCTOPUS													
PERCH										.71			.71
SKATE													
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD													
TOTAL					7.29	5.44			5.83	69.43	10.89		98.88
CRAB													
DUMPED FISH													
DISCARDS													

TABLE 37. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 2AE.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE													
PETRALE S.													
DOVER SOLE													
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR													
OTHER FLAT.													
PACIFIC COD		8.83											8.83
LINGCOD													
SABLEFISH													
POLLOCK													
OCEAN PERCH													
BOCACCIO													
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF													
YEL'MOUTH R													
YEL'TAIL RF													
WIDOW RF													
OTHER RF													
HAKE													
OCTOPUS													
PERCH													
SKATE													
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION		.05											.05
ANIMALFOOD													
TOTAL		8.88											8.88
CRAB													
DUMPED FISH													
DISCARDS													

TABLE 38. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 1E.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.		.25		1.39	4.04	.12						.31	6.11
ROCK SOLE		1.54		1.63	.09	.98			5.34	3.89	1.18	.04	14.69
PETRALE S.				.01	.08					.14			.23
DOVER SOLE				.03	.01	3.50			1.76	.58	.06		5.94
REX SOLE				1.14	.20	.09				.40			1.83
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR		.56		.26		.94			9.72	.57	2.46		14.51
OTHER FLAT.													
PACIFIC COD		.64		5.30	5.27	.15		6.36	1.35				19.07
LINGCOD				.32	2.95	1.94			.30	.70			6.21
SABLEFISH													
POLLOCK						.03							.03
OCEAN PERCH						3.55							3.55
BOCACCIO		.12										4.08	4.20
CANARY RF													
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF					.05	1.19							1.24
YEL'MOUTH R													
YEL'TAIL RF									.34			1.70	2.04
WIDOW RF													
OTHER RF					.01					.13			.14
HAKE													
OCTOPUS									.04				.04
PERCH													
SKATE		.36		3.51	.32			.55	1.11	1.33			7.18
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION												2.15	2.15
ANIMALFOOD													
TOTAL		3.47		13.59	13.02	12.49		6.91	19.96	7.74	3.70	8.28	89.16
CRAB													
DUMPED FISH													
DISCARDS										2.27			2.27

TABLE 39. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 4.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	3.34	.54	14.04	53.49	74.34	59.14	60.71	27.49	22.80	13.94	21.73	6.58	358.14
ROCK SOLE		.60	.19	8.81	31.80	13.37	17.35	14.88	13.88	13.45	13.98	.02	128.33
PETRALE S.	.37		.08	.68	.54	1.11	.91	1.63	.77	.61	.78	.17	7.65
DOVER SOLE				.07	.84	5.30	68.30	92.30	49.05	36.81	35.14		287.81
REX SOLE			.01	.46	2.99	4.15	13.96	10.29	18.22	2.69	12.07		64.84
FLATHEAD S.													
SAND SOLE													
TURBOT			.33	18.32	15.58	83.28	288.10	65.42	41.78	73.59	32.36		618.76
STAR.FLDR			.41	1.80	8.74	.19	.27	1.47	2.68	4.77	4.04		24.37
OTHER FLAT.				.68									.68
PACIFIC COD	4.21	.26	390.99	338.71	291.72	849.55	345.54	354.66	364.66	45.60	72.56	2.99	3061.45
LINGCOD			5.77	10.47	19.32	24.04	15.27	21.16	18.86	4.84	7.83	12.49	140.05
SABLEFISH					.08	1.15	5.00	1.69	2.48	.31			10.71
POLLOCK	1.18	.01		.52	.10	.18	.54	.99					3.52
OCEAN PERCH				.01		.18			.06	.07	.13		.45
BOCACCIO				.06		.34	.20	.24	.22	.39	.54		1.99
CANARY RF				9.02								2.06	11.08
REDSTR. RF													
ROUGHEYE RF												1.37	1.37
SIL'GRAY RF				.09	.03	.37	.60	.02					1.11
YEL'MOUTH R					.16								.16
YEL'TAIL RF	1.06				.31	1.71	2.57	1.42	3.00		.80		10.87
WIDOW RF													
OTHER RF			.01	.63	.04	.46	.49	1.51	1.40	1.73	.48		6.75
HAKE													
OCTOPUS	.24	.11	.14	.57	.23	.22	.16	.14	.76	.76	.33		3.66
PERCH													
SKATE	.27	.89	6.27	19.38	28.54	12.17	9.74	15.29	18.18	7.57	7.88	1.13	127.31
SQUID													
STURGEON													
MISC. SP.													
DOGFISH						.19							.19
REDUCTION												5.45	5.45
ANIMALFOOD	.07		.17	4.71	14.99	4.38	55.17	7.82	9.20	3.15	3.81		103.47
TOTAL	10.74	2.41	418.41	468.48	490.35	1061.48	884.88	618.42	568.00	210.28	214.46	32.26	4980.17
CRAB													
DUMPED FISH													
DISCARDS			3.18	38.10	4.99	167.84	82.33	41.64	17.69	4.54	44.50		404.81

TABLE 40. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 5U.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.	17.38	25.58	20.08	21.18	11.10	2.61	1.72	4.80	2.74	19.04	27.46	2.15	155.84
ROCK SOLE	.47	19.99	11.91	23.45	17.34	5.70	9.39	.23	52.39	25.47	14.29		180.63
PETRALE S.	3.21	2.57	.99	1.86	2.68	.70	.70	2.37	.10	10.80	13.55	.50	40.03
DOVER SOLE				.11		.01	.02	2.00	1.66	15.57	14.07		33.44
REX SOLE	2.37	.91	.23	.22	.01	.03			.07	.44	2.28		6.56
FLATHEAD S.													
SAND SOLE													
TURBOT	.31	.61		.41	.02				.11	5.88	14.75		22.09
STAR.FLDR											.02		.02
OTHER FLAT.		2.09	4.98	.06							.13		7.26
PACIFIC COD	399.16	543.69	423.72	358.23	335.66	137.57	116.86	59.69	133.56	411.67	264.65	24.31	3208.77
LINGCOD	3.66	3.73	4.64	4.95	6.78	.04		.39	.64	8.27	6.85	.21	40.16
SABLEFISH	.02					.05		.04	.37	11.13	5.99		17.60
POLLOCK	.01	.03		.07									.11
OCEAN PERCH													
BOCACCIO	.94			1.07	.29		.28		1.11	7.59	5.25	.24	16.77
CANARY RF		.64		.02	.23				.09				.98
REDSTR. RF													
ROUGHEYE RF													
SIL'GRAY RF	.05			2.05	1.68				.72	3.96	5.33		13.79
YEL'MOUTH R													
YEL'TAIL RF	.30	.11				1.41	.49		.12	4.55	1.10	.08	8.16
WIDOW RF											.03		.03
OTHER RF	.30	.93	8.44	.66	.59	2.25	.01	.10	.61	3.85	.42		18.16
HAKE													
OCTOPUS	1.42	2.14	1.01	.54	.22	.09	.03		.04	3.31	2.31	.10	11.21
PERCH													
SKATE	3.56	4.92	.27	1.41			1.09	.03		.33	1.08	.13	12.82
SQUID													
STURGEON			.01										.01
MISC. SP.													
DOGFISH				2.30									2.30
REDUCTION		16.17				26.82							42.99
ANIMALFOOD		1.26	.51	.08		2.19		.26					4.30
TOTAL	433.16	625.37	476.79	418.67	376.60	179.47	130.59	69.91	194.33	531.86	379.56	27.72	3844.03
CRAB													
DUMPED FISH													
DISCARDS	2.27	9.57	28.17	7.35	143.32	14.52	3.18	.82	.68	15.88	3.40		229.16

TABLE 41. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 1W.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.			.11			.01							.12
ROCK SOLE													
PETRALE S.			4.40	2.56	.45	.41		.05					7.87
DOVER SOLE			19.94	10.96	28.00	4.75		.85		.33			64.83
REX SOLE			.31	1.37	1.21	.30							3.19
FLATHEAD S.													
SAND SOLE													
TURBOT	.26		.12	.72	.33	.09							1.52
STAR.FLDR													
OTHER FLAT.													
PACIFIC COD			1.08	.21	.37	1.02		.17		.22			3.07
LINGCOD			.92	.10	.71	.65		.18					2.56
SABLEFISH	.08		12.11	1.71	6.13	7.88		1.23		.23			29.37
POLLOCK													
OCEAN PERCH	3.47		118.28	54.36	408.95	354.15		145.53		44.96			1129.70
BOCACCIO					.50	.16							.66
CANARY RF			.49							.41			.90
REDSTR. RF	1.84		52.40	4.16	71.66	68.89		19.42		5.92			224.29
ROUGHEYE RF	.31		66.33	10.54	61.83	13.72		12.89		14.24			179.86
SIL'GRAY RF	6.03		25.56	3.26	19.00	11.77		10.17		9.08			84.87
YEL'MOUTH R			21.54		20.75	5.81		51.08		9.73			108.91
YEL'TAIL RF			.64		3.55	1.61							5.80
WIDOW RF			.67		3.03			.23					3.93
OTHER RF	.26		23.19	.92	36.94	8.26		71.21		.49			141.27
HAKE													
OCTOPUS													
PERCH													
SKATE			.09		.01					.13			.23
SQUID			.01	.03	.17	.05							.26
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION						6.64							6.64
ANIMALFOOD	.95		5.48	1.00	8.00	6.23							21.66
TOTAL	13.20		353.67	91.90	671.59	492.40		313.01		85.74			2021.51
CRAB													
DUMPED FISH													
DISCARDS					6.58	2.72							9.30

TABLE 42. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 2AW.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE													
PETRALE S.	2.26	2.78	3.71	1.35	.61				.14				10.85
DOVER SOLE	21.20	10.39	7.46	30.35	11.41						1.87		82.68
REX SOLE	.02	.02	.04	.17									.25
FLATHEAD S.													
SAND SOLE													
TURBOT	.01	3.84	5.41										9.26
STAR.FLDR													
OTHER FLAT.													
PACIFIC COD		.27	.11	.10						.01	.93		1.42
LINGCOD	.02	.56	.19	.05						.03	2.42		3.27
SABLEFISH	12.14	18.23	11.50	4.02	.82		.20		.05	.03	2.05	.18	49.22
POLLOCK													
OCEAN PERCH	118.38	122.91	85.24	116.28	18.84		2.69		.74		3.67		468.75
BOCACCIO	1.97	.02								.21	2.04		4.24
CANARY RF	8.09	.76	1.34								1.49		11.68
REDSTR. RF	97.88	215.68	160.76	11.91	6.50		16.35		15.83		83.92	19.00	627.83
ROUGHEYE RF	25.63	99.70	81.08	58.36	30.68		.07						295.52
SIL'GRAY RF	16.50	45.41	14.91	10.94	1.80		2.65		1.49	1.74	2.66		98.10
YEL'MOUTH R	42.08	184.78	38.04	57.55	27.43		50.54		15.83	13.66	2.99		432.90
YEL'TAIL RF	.64	11.98	26.84							.50			39.96
WIDOW RF	8.34	33.14	12.80	3.23			.53		.16				58.20
OTHER RF	3.56	7.10	11.01	8.62	1.69					24.71	7.75		64.44
HAKE													
OCTOPUS		.02											.02
PERCH													
SKATE													
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION	2.18												2.18
ANIMALFOOD	1.71	17.44	6.41	1.94									27.50
TOTAL	362.61	775.03	466.85	304.87	99.78		73.03		34.24	40.89	111.79	19.18	2288.27
CRAB													
DUMPED FISH													
DISCARDS													

TABLE 43. 1987 BRITISH COLUMBIA TRAWL LANDINGS (T) OF GROUNDFISH FROM STATISTICAL AREA 2BW.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH S.													
ROCK SOLE													
PETRALE S.										.78			.78
DOVER SOLE				.09									.09
REX SOLE													
FLATHEAD S.													
SAND SOLE													
TURBOT													
STAR.FLDR													
OTHER FLAT.													
PACIFIC COD										.05			.05
LINGCOD													
SABLEFISH	.01			.05									.06
POLLOCK													
OCEAN PERCH	57.36			127.03	1.81								186.20
BOCACCIO										.50			.50
CANARY RF										.02			.02
REDSTR. RF				1.12									1.12
ROUGHEYE RF				.59									.59
SIL'GRAY RF				1.71						13.41			15.12
YEL'MOUTH R	7.13			10.56									17.69
YEL'TAIL RF				.72									.72
WIDOW RF				.69									.69
OTHER RF	2.53			7.66									10.19
HAKE													
OCTOPUS													
PERCH													
SKATE													
SQUID													
STURGEON													
MISC. SP.													
DOGFISH													
REDUCTION													
ANIMALFOOD													
TOTAL	67.03			150.22	1.81					14.76			233.82
CRAB													
DUMPED FISH													
DISCARDS				.27									.27

OTHER GROUNDFISH FISHERIES

Groundfish landings in this category are those caught by longline, trap, handline, troll, and incidental to shrimp trawl. In 1987, these landings totalled 9,602 t, 28 % above the 1986 total. Sablefish (4,312 t), dogfish (2,378 t), rockfish (1,663 t) and lingcod (1,190 t) accounted for 99% of the catch by other gear. Catches by main species, gear type and major area are presented in Table 44.

No effort data are available for handline, troll, longline or incidental to shrimp trawl. The catches for these gears were obtained from British Columbia Commercial Catch Statistics 1987, by Species, Gear, Month, and Area, Fisheries and Oceans, Canada, Pacific Region.

Interviews were conducted with skippers of trap vessel to obtain catch and effort data. Total trap landings in 1987 were 3,089 t of which sablefish was the prominent species. The main areas of production were the northwest coast of Vancouver Island (Area 3D), west coast of Queen Charlotte Islands (Area 5E) and north Queen Charlotte Sound (Area 5B) accounting for 37%, 27%, and 22% respectively. Trap landings of groundfish in 1987 by major area, month and species, are presented in Tables 45-51. Sixty-three percent (by weight) of the trap landings were covered by interviews. Table 52 shows the monitored landings, effort and CPUE by major area. A separation of the 1987 trap landings by minor area is given in Table 53.

Table 44. British Columbia landing (t, round weight) of groundfish caught by gear other than trawl in 1987[a] by major area and species.

Gear and species	Major Area								
	4B	3C	3D	5A	5B	5C	5D	5E	Total
Handline and troll									
Dogfish	1.80	2.80	-	-	-	-	-	-	4.60
Lingcod	92.01	171.99	171.86	33.66	33.23	29.08	60.85	33.10	625.78
Pacific cod	7.09	1.15	-	0.02	0.04	0.02	0.02	-	8.34
Pacific ocean perch	0.02	0.14	0.20	-	0.82	-	-	-	1.18
Other rockfish	259.96	84.56	76.77	28.07	20.90	9.84	17.15	4.70	501.59
Sablefish	2.02	4.28	48.73	0.02	-	0.19	0.83	0.04	56.11
Sole	3.34	-	-	-	0.93	-	-	-	4.27
Misc. species	1.65	1.53	-	0.31	0.05	0.17	-	-	3.71
Incidental to shrimp trawl									
Lingcod	-	1.50	-	-	-	-	-	-	1.50
Pacific cod	1.43	0.06	-	-	-	-	-	-	1.49
Other rockfish	0.36	1.07	-	-	-	-	-	-	1.43
Sablefish	-	0.03	-	-	-	-	-	-	0.03
Sole	0.17	1.77	-	-	-	-	-	-	1.94
Misc. species	0.02	0.27	-	-	-	-	-	-	0.29
Longline									
Dogfish	538.43	771.06	84.35	262.56	6.53	137.52	54.96	0.90	1856.31
Lingcod	11.19	49.52	104.15	27.31	28.12	136.14	77.88	20.55	454.87
Pacific cod	5.20	0.95	-	0.96	0.69	0.77	0.39	0.02	8.98
Pacific ocean perch	-	0.49	-	-	-	0.09	0.03	-	0.61
Other rockfish	105.02	93.52	166.83	88.06	71.92	176.05	131.59	37.65	870.64
Sablefish	16.07	501.94	153.01	23.91	38.62	162.17	161.25	76.43	1133.40
Sole	-	-	-	0.25	-	-	-	-	0.25
Misc. species	6.58	3.28	3.89	1.47	0.45	3.76	0.59	-	20.02
Animal food	1.64	0.57	-	-	-	-	-	-	2.21
Trap									
Lingcod	-	-	-	-	0.69	-	-	-	0.69
Other rockfish	-	-	43.88	-	-	-	-	1.45	45.33
Sablefish	23.49	130.40	1089.91	254.74	678.24	21.56	-	844.68	3043.02
Total									
Dogfish	540.23	773.86	84.35	262.56	6.53	137.52	54.96	0.90	1806.91
Lingcod	103.20	223.01	276.01	60.97	62.05	165.22	138.73	53.65	1082.84
Pacific cod	13.72	2.16	-	0.98	0.73	0.79	0.41	0.02	18.81
Pacific ocean perch	0.02	0.63	0.20	-	0.82	0.09	0.03	-	1.79
Other rockfish	365.34	179.15	287.48	116.13	92.82	185.53	148.74	43.80	1418.99
Sablefish	41.58	636.65	1291.65	278.67	716.86	183.92	162.08	921.15	4232.56
Sole	3.51	1.77	0.25	-	0.93	-	-	-	6.46
Misc. species	8.25	5.08	3.89	1.78	0.50	3.93	0.59	-	24.02
Animal food	1.64	0.57	-	-	-	-	-	-	2.21

[a]Preliminary data.

TABLE 45. 1987 BRITISH COLUMBIA TRAP LANDINGS (T) OF GROUNDFISH -- INTERNATIONAL AREA 4B, STRAIT OF GEORGIA.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
LINGCOD SABLEFISH OTHER ROCKF.				8.72					14.77				23.49
TOTAL				8.72					14.77				23.49

TABLE 46. 1987 BRITISH COLUMBIA TRAP LANDINGS (T) OF GROUNDFISH -- INTERNATIONAL AREA 3C, SOUTHWEST COAST VANCOUVER

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
LINGCOD SABLEFISH OTHER ROCKF.		9.81	28.77	36.17					55.65				130.40
TOTAL		9.81	28.77	36.17					55.65				130.40

TABLE 47. 1987 BRITISH COLUMBIA TRAP LANDINGS (T) OF GROUNDFISH -- INTERNATIONAL AREA 3D, NORTHWEST COAST VANCOUVER

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
LINGCOD													
SABLEFISH				378.14			129.81		581.96				1089.91
OTHER ROCKF.							25.02		18.86				43.88
TOTAL				378.14			154.83		600.82				1133.79

TABLE 48. 1987 BRITISH COLUMBIA TRAP LANDINGS (T) OF GROUNDFISH -- INTERNATIONAL AREA 5A, SOUTH QUEEN CHARLOTTE

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
LINGCOD													
SABLEFISH			67.44	157.98					29.32				254.74
OTHER ROCKF.													
TOTAL			67.44	157.98					29.32				254.74

TABLE 49. 1987 BRITISH COLUMBIA TRAP LANDINGS (T) OF GROUNDFISH -- INTERNATIONAL AREA 5B, NORTH QUEEN CHARLOTTE

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
LINGCOD				.69									.69
SABLEFISH				420.08					258.16				678.24
OTHER ROCKF.													
TOTAL				420.77					258.16				678.93

TABLE 50. 1987 BRITISH COLUMBIA TRAP LANDINGS (T) OF GROUNDFISH -- INTERNATIONAL AREA 5C, SOUTH HECATE STRAIT.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
LINGCOD SABLEFISH OTHER ROCKF.			18.75	2.05					.76				21.56
TOTAL			18.75	2.05					.76				21.56

TABLE 51. 1987 BRITISH COLUMBIA TRAP LANDINGS (T) OF GROUNDFISH -- INTERNATIONAL AREA 5E, WEST COAST QUEEN CHARLOTTE

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
LINGCOD													
SABLEFISH				393.82	30.87	57.83			362.16				844.68
OTHER ROCKF.					1.45								1.45
TOTAL				393.82	32.32	57.83			362.16				846.13

Table 52. Total landings (t), monitored landings (t), and monitored effort (traps) for the British Columbia trap fleet in 1987.

Major area	Total landings (t)	Monitored landings (t)	Monitored effort (traps)	Monitored CPUE (t/trap)
4B	23.49	23.49	5,900	0.004
3C	130.40	65.46	7,371	0.009
3D	1133.79	570.24	42,380	0.013
5A	254.74	187.31	9,700	0.019
5B	678.93	474.78	22,440	0.021
5C	21.56	21.56	4,008	0.005
5D	-	-	-	-
5E	846.13	600.63	34,332	0.017
Total	3089.04	1943.47	126,131	0.015

Table 53. British Columbia trap landings (t) by species and minor area in 1987.

	Minor area							
Species	12	13	15	16	17	21	23	24
Lingcod	-	-	-	-	-	-	-	-
Other rockfish	-	-	-	-	-	-	-	-
Sablefish	10.19	3.42	0.21	5.40	4.26	48.31	53.33	28.77
Total	10.19	3.42	0.21	5.40	4.26	48.31	53.33	28.77

	Minor area							
Species	25	26	27	11	8	5L	6	2BE
Lingcod	-	-	-	-	0.69	-	-	-
Other rockfish	18.56	-	25.32	-	-	-	-	-
Sablefish	473.61	83.04	533.26	254.74	678.24	2.46	18.34	0.76
Total	492.17	83.04	558.57	254.74	678.93	2.46	18.34	0.76

	Minor area			
Species	1W	2AW	2BW	Total
Lingcod	-	-	-	0.69
Other rockfish	-	1.45	-	45.33
Sablefish	24.51	607.92	212.25	3043.02
Total	24.51	609.37	212.25	3089.04

JOINT-VENTURE/FOREIGN FISHERIES

Since 1978, Canadian trawlers have participated in joint-venture fisheries. Canadian catcher vessels deliver Pacific hake and incidental species to foreign processing vessels in cooperative fishing arrangements. These fisheries take place off the southwest coast of Vancouver Island (Area 3C). These data are separated from the domestic landings because the joint-venture and foreign catches (converted from processed weight) are reported by the foreign processing vessels and cannot by verified by weight tallies. These data were collated and tallied by the Offshore Division of Fisheries Branch in Vancouver.

In 1987, twenty-one Canadian catcher vessels delivered Pacific hake and incidental species to seventeen processing vessels. A total of 48,076 t of Pacific hake was processed by eleven Polish vessels, five Soviet vessels and one Korean vessel.

Other countries have conducted fisheries for Pacific hake off the southwest coast of Vancouver Island for several years. Several of the processing vessels involved in the joint-venture fishery occasionally fish directly (supplemental fishing) when Canadian domestic vessels cannot supply sufficient quantities of Pacific hake. This supplemental catch is added to the national catch.

Eleven Polish and four Soviet vessels caught 19,141 t of Pacific hake during the national fishery in 1987. Fifteen of the processing vessels caught 2,314 t of Pacific hake during supplemental fishing.

The joint-venture and foreign catches of groundfish for 1987 are presented in Table 54.

Table 54. Joint-venture and foreign catches[a] (t) of groundfish from International Area 3C -- southwest coast of Vancouver Island in 1987.

Nation and species	Joint-venture	National	Supplemental	Total
Poland				
Pacific hake	26,347	7,663	2,054	36,064
Walleye pollock	686	19	3	708
Pacific ocean perch	7	65	3	75
Other rockfish	37	159	46	242
Other species	20	3	tr.	23
USSR				
Pacific hake	18,866	11,478	260	30,604
Walleye pollock	325	64	-	389
Pacific ocean perch	1	122	2	125
Other rockfish	70	173	3	246
Other species	tr.	22	-	22
Korea				
Pacific hake	2,863	-	-	2,863
Walleye pollock	71	-	-	71
Pacific ocean perch	-	-	-	-
Other rockfish	5	-	-	5
Other species	-	-	-	-
Total				
Pacific hake	48,076	19,141	2,314	69,531
Walleye pollock	1,082	83	3	1,168
Pacific ocean perch	8	187	5	200
Other rockfish	112	332	49	493
Other species	20	25	tr.	45

[a]Catches (converted from processed weight) are reported by foreign processing vessels and cannot be verified by weight tallies.

CATCHES BY INPFC AREA

This report is also produced to satisfy requirements of committees of the International North Pacific Fisheries Commission (INPFC) (Canada, Japan and United States). To complement the previous tables, groundfish landings in metric tonnes (t) are presented in Tables 55-57 for trawl and other gears according to INPFC areas. The relationship between these INPFC areas and the major areas used in the first portion of this report is as follows:

INPFC Area	Major Area	Latitude
Charlotte	5A, 5B, 5C, 5D, 5E[5]	50°30'N - 54°30'N
Vancouver	3B[6], 3C[6], 3D, 4B[7]	47°30'N - 50°30'N

[5]Northernmost 10 miles actually in Southeastern.
[6]Southernmost 10 miles actually in Columbia.
[7]Inside waters (Strait of Georgia).

Table 55. British Columbia landings[a] (t) of groundfish taken by all types of gear in 1987 by INPFC area.

Species	INPFC area		Total
	Vancouver	Charlotte	
English sole	83.08	671.41	754.49
Rock sole	68.56	818.34	886.90
Petrale sole	160.55	284.90	445.45
Dover sole	52.58	580.77	633.35
Rex sole	0.46	82.47	82.93
Starry flounder	10.99	54.48	65.47
Turbot	48.27	1,144.82	1,193.09
Other flatfish	196.36	36.59	232.95
Pacific cod	1,841.45	12,075.16	13.916.61
Lingcod	1,277.12	2,313.67	3,590.79
Sablefish	2,246.75	2,472.53	4,719.28
Pollock	1,231.48	38.08	1,269.56
Hake	13,275.20	-	13,275.20
Pacific ocean perch	993.73	5,341.38	6,335.11
Other rockfish	7,964.78	10,210.60	18,175.38
Misc. species	50.37	293.55	343.92
Dogfish	3,173.10	627.81	3,800.91
Animal food	4.91	182.93	187.84
Reduction	53.33	157.12	210.45
Total	32,733.07	37,386.61	70,119.68

[a]Does not include catches from joint-venture or foreign fishery, see Table 54.

Table 56. British Columbia domestic trawl landings (t) of groundfish in 1987 by INPFC area.

Species	INPFC area		Total
	Vancouver	Charlotte	
English sole	83.08	671.41	754.49
Rock sole	68.56	818.34	886.90
Petrale sole	160.55	284.90	445.45
Dover sole	52.58	580.77	633.35
Rex sole	0.46	82.47	82.93
Starry flounder	10.99	54.48	65.47
Turbot	48.27	1,144.82	1,193.09
Other flatfish	190.03	35.66	225.69
Pacific cod	1,824.01	12,072.08	13,896.09
Lingcod	597.19	1,803.42	2.400.61
Sablefish	246.72	160.25	406.97
Pollock	1,231.48	38.08	1,269.56
Hake	13,275.20	-	13,275.20
Pacific ocean perch	992.78	5,341.26	6,433.04
Other rockfish	6,966.75	9,548.48	16,515.23
Misc. species	28.50	286.09	314.59
Dogfish	1,351.85	70.90	1,422.75
Animal food	2.69	182.93	185.62
Reduction	53.33	157.12	210.45
Total	27,185.02	33,333.46	60,518.48

Table 57. British Columbia landings (t) of groundfish caught by gear other than trawl in 1987 by INPFC area.

Gear and species	INPFC area		Total
	Vancouver	Charlotte	
Handline and troll			
Dogfish	4.84	-	4.84
Lingcod	483.67	196.07	679.74
Pacific cod	6.89	0.09	6.98
Pacific ocean perch	0.36	-	0.36
Other rockfish	497.09	93.12	590.21
Sablefish	0.37	0.32	0.69
Sole	3.23	-	3.23
Misc. species	3.31	0.66	3.97
Incidental to shrimp trawl			
Lingcod	5.41	-	5.41
Pacific cod	1.75	-	1.75
Other rockfish	4.57	-	4.57
Sablefish	0.03	-	0.03
Sole	2.31	-	2.31
Misc. species	0.37	-	0.37
Longline			
Dogfish	1,816.66	556.66	2,373.32
Lingcod	190.85	313.49	504.34
Pacific cod	8.80	2.99	11.79
Pacific ocean perch	0.59	0.12	0.71
Other rockfish	452.49	569.14	1,021.63
Sablefish	755.83	512.74	1,268.57
Sole	0.79	-	0.79
Misc. species	18.19	6.80	24.99
Animal food	2.22	-	2.22
Trap			
Lingcod	-	0.69	0.69
Other rockfish	43.88	1.45	45.33
Sablefish	1,243.80	1,799.22	3,043.02
Total	5,548.30	4,053.56	9,601.86

ACKNOWLEDGMENTS

The coverage of the groundfish fishery in 1987 was efficiently maintained by liaison officers N. L. Venables and D. P. Adams with headquarters in Vancouver and by I. Winther in Prince Rupert. Special thanks to J. E. Leaman, R. D. Stanley, B. Andrews, and A. Thompson for coding portions of the data. The cooperation of the Statistics Division and the Offshore Division of the Fisheries Branch in Vancouver is greatly appreciated. We are also grateful to J. M. Hamer for producing the programs on data acquisition and trawl fishery tables.